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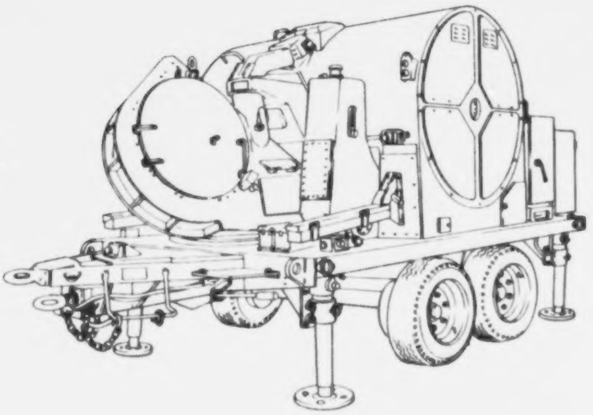
TM 9-1095-205-34-1

TECHNICAL MANUAL

MAINTENANCE INSTRUCTIONS DIRECT SUPPORT/GENERAL SUPPORT MAINTENANCE



HOW TO USE THIS MANUAL
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(DIRECT SUPPORT)
Page 2-3

TROUBLESHOOTING
(GENERAL SUPPORT)
Page 2-219

LAUNCHER FEED SYSTEM
(DIRECT SUPPORT)
Page 3-1

M128 GROUND VEHICLE MINE DISPENSER
(1095-00-397-3456)

HEADQUARTERS, DEPARTMENT OF THE ARMY

September 1984

READEX FICHE best copy available

Reproduced from poor document.

0101.11:

WARNINGS AND FIRST AID DATA

WARNING

CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU

Carbon monoxide is colorless and odorless, but it can kill you. Breathing carbon monoxide causes headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Heavy exposure can cause brain damage or death. Exhaust fumes of fuel burning heaters and internal combustion engines contain carbon monoxide. Carbon monoxide becomes dangerously concentrated when there is no air movement. Always follow safety precautions when the engine coolant heater or dispenser diesel engine is operated for any purpose.

1. DO NOT operate coolant heater or diesel engine in a closed place unless the place has a lot of moving air.
2. DO NOT idle diesel engine for long periods without ventilation.
3. BE ALERT at all times for exhaust odors and exposure symptoms. If either is present, IMMEDIATELY remove affected crew to fresh air. Keep them warm. DO NOT PERMIT PHYSICAL EXERCISE. If necessary, give them artificial respiration.

   FOR ARTIFICIAL RESPIRATION, REFER TO FM 21-11.
4. BE AWARE: the chemical, biological, and radiological (CBR) protective mask WILL NOT protect you from carbon monoxide.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

WARNING

Cleaning solvent can explode and can burn. Keep it away from heat or open flame. NO SMOKING. Solvent fumes can make you sick. USE IN A WELL VENTILATED AREA. Keep solvent off your skin as much as you can.

WARNING

Asbestos dust can be harmful to your health. Clean brake assembly parts in ventilated area.

WARNING

Fuel can catch fire and burn you. NO SMOKING. Wipe up spilled fuel. Remove battery ground cable before working on fuel system.

WARNING

You will be injured if dispenser falls on you. Use hydraulic jack to support dispenser during and after removal of leveling jack. Remove and install only one leveling jack at a time.

GO TO NEXT PAGE

WARNINGS AND FIRST AID DATA — Continued

WARNING

You could be hurt if heavy dispenser parts fall on you. Use helper when you remove or install heavy dispenser parts.

WARNING

Flying bits of metal could blind you. Always wear goggles when you cut metal or use power tools.

WARNING

Dirt and dispenser fluids may hurt your eyes. Wear goggles when working under the chassis.

WARNING

Compressed air can hurt you. Never aim air at soldiers or use more pressure than 30 psi (207 kPa). Always wear goggles.

WARNING

Fuel can catch fire and burn you. NO SMOKING. Wipe up spilled fuel.

WARNING

Hydraulic system pressure could reach 3400 psi (23,450 kPa) during startup. A high pressure fluid jet can hurt you. Wear goggles when you check for leaks.

WARNING

Gas that flows into accumulator during precharging is under high pressure. A high pressure gas jet can hurt you. Make sure gas chuck and nitrogen supply connections are tight.

WARNING

Emergency valve drain plug is under pressure and can fly off and hurt you. Open air tank drain valve before you remove emergency valve drain plug.

WARNING

Hot coolant can burn you. Do not get hot coolant on skin. Turn radiator cap slowly to let out pressure.

WARNING

Coolant heater exhaust gases and exhaust tube can burn you. Keep your hands at a safe distance from coolant heater exhaust tube while coolant heater is running.

WARNING

Running the engine and operating the dispenser causes many parts to heat up. DON'T TOUCH any of the following parts when they are hot from use.

- Coolant Hoses
- Exhaust Pipe
- Oil Filters
- Hydraulic Pumps
- Radiator
- Engine Parts

WARNING

Extremely cold and hot parts can injure you. Use gloves when handling extremely cold and hot parts.

WARNING

Launcher guides have sharp edges that can hurt you. Wear gloves when handling launcher guides.

WARNING

Holes in rocker arm shaft have sharp edges that can hurt you. Be careful when you handle rocker arm shaft.

WARNING

Engine parts could hurt you. Stay clear of moving parts when engine is running.

WARNING

Parts rotating at high speeds can harm you. Keep objects away from parts rotating at high speeds.

WARNING

Reel can hurt you when it rotates. Hold reel when removing or installing master link.

WARNING

Launcher can harm you when it oscillates. Make sure manual bypass valve is at OPEN before you move launcher by hand.

WARNING

Air chamber assembly cover is spring loaded and could fly off and hurt you. Hold chamber assembly together during cover removal.

WARNING

Keep away from hanging loads and overhead equipment. Keep hands out of engine compartment when power unit is being removed or installed.

GO TO NEXT PAGE

WARNINGS AND FIRST AID DATA — Continued

WARNING

Spring loaded radiator vanes can hurt you. Do not let vanes snap shut on your fingers.

WARNING

Hydrogen gas from batteries can explode and hurt you. Do not allow sparks near batteries. Battery acid can burn or blind you. Do not get acid on your skin or eyes.

WARNING

Battery posts and cables touched by metal objects can short circuit and burn you. Do not wear jewelry, including watches, or let ID tags hang down, when working on the electrical system. Keep tools away from posts, wires, and terminals.

WARNING

A short circuit can cause welding heat. Make sure MASTER POWER switch is in down (OFF) position when you repair electrical circuits or parts.

WARNING

Axle assembly and wheels are heavy. They can fall and hurt you when springs come out of spring shackles. Do not get under wheels and axle unless they are properly supported.

WARNING

Launcher can hurt you when it oscillates or if it throws tools or parts during oscillation. When engine is running, stay clear of launcher deck, and keep tools and parts off launcher deck.

WARNING

Current of 50 — 70 amp can cause severe burns or other injury. Make sure all connections are tight. Keep tools clear of armature during test. Do not wear jewelry or watch. Wear goggles.

WARNING

Capacitor can discharge and injure you. Discharge capacitor before working on circuit.

WARNING

You can be hurt or killed if practice mines strike you after they have been launched. Do not stand closer than 70 yd (68.5 m) behind mine dispenser that is dispensing practice mines.

INSERT LATEST CHANGED PAGES.
DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE

The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands.

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 3086
CONSISTING OF THE FOLLOWING:

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Cover	0
a thru d	0
A thru C	0
D blank	0
i thru ix	0
1-0 and 1-1	0
1-2 blank	0
1-3 thru 1-7	0
1-8 blank	0
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1-10 blank	0
1-11	0
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1-13 thru 1-19	0
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2-1	0
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2-234 blank	0
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3-3 thru 3-11	0
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3-13 thru 3-49	0
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A	0
B blank	0
i	0
ii blank	0
4-1	0
4-2 blank	0
4-3 thru 4-5	0
4-6 blank	0
4-7 thru 4-21	0
4-22 blank	0
4-23 thru 4-61	0
4-62 blank	0
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4-78 blank	0
4-79 thru 4-81	0
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4-83 thru 4-109	0
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4-159 thru 4-177	0
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4-195 thru 4-205	0
4-206 blank	0
4-207 thru 4-223	0
4-224 blank	0
4-225 thru 4-247	0
4-248 blank	0
4-249 thru 4-321	0
4-322 blank	0
4-323 thru 4-332	0
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5-49 thru 5-57	0
5-58 blank	0
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6-2 blank	0
6-3 thru 6-5	0
6-6 blank	0
6-7 thru 6-19	0
6-20 blank	0
6-21 thru 6-35	0
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6-47 thru 6-93	0
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* Zero in this column indicates an original page.

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i	0
ii blank	0
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7-3 thru 7-5	0
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9-3 thru 9-165	0
9-166 blank	0
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10-3 thru 10-65	0
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13-1	0
13-2 blank	0
13-3 thru 13-17	0
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14-2 blank	0
14-3 thru 14-38	0
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15-2 blank	0
15-3 thru 15-79	0
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15-129 thru 15-159	0
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* Zero in this column indicates an original page.

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19-1	0
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19-3 thru 19-75	0
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B blank	0
i and ii	0
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20-2 blank	0
20-3 thru 20-33	0
20-34 blank	0
20-35 thru 20-81	0
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20-107 thru 20-111	0
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20-113 thru 20-127	0
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20-129 thru 20-149	0
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A-1 and A-2	0
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C-1 thru C-67	0
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FO-12 (sheet 1 and sheet 2)	0

* Zero in this column indicates an original page.

TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 1 September 1984

DIRECT SUPPORT/GENERAL SUPPORT MAINTENANCE MANUAL

M128 GROUND VEHICLE MINE DISPENSER

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander; U.S. Army Armament, Munitions and Chemical Command: ATTN: DRSMC-MAS (R); Rock Island, IL 61299. A reply will be furnished to you.

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HOW TO USE THIS MANUAL

PURPOSE OF MANUAL

This manual tells how to perform direct and general support level troubleshooting and maintenance procedures on the M128 Ground Vehicle Mine Dispenser. You must familiarize yourself with the entire maintenance procedure before beginning the maintenance task.

HOW TO FIND THE INFORMATION YOU NEED IN THE MANUAL

The following information will help you find the troubleshooting and maintenance procedures you need to fix the mine dispenser.

Front Cover Index

The Index on the front cover will help you find the information by major heading titles. Put your thumb on the black tab on the cover. Flip through the pages until you find the page with the matching black tab.

Table of Contents

The Table of Contents lists information by chapter and section titles. Turn to the Table of Contents (see page i). Find the chapter and section title of the information you need. Turn to the page number following the title.

Index

The Index (see page Index 1) lists information by subject title followed by page number. Subject titles are in alphabetical order [EXAMPLE: Access Cover, Gear (See Gear Access Cover), 4-137; Gear Access Cover, 4-137]. Locate the title of the information you need in the Index. Read the page number following the title. Turn to the page number listed.

Manual Contents

This manual is divided into 20 chapters in seven volumes as follows:

- Volumes 1, 2, and 3:
  - Chapter 1:
    - General information
    - Location and description of major components
    - Engine specifications
  - Chapter 2:
    - How to perform troubleshooting at direct support level
    - How to perform troubleshooting at general support level
    - How to prepare the mine dispenser for storage or shipment
  - Chapters 3 through 9:
    - Maintenance procedures for direct support level
- Volumes 4 and 5:
  - Chapters 10 through 15:
    - Maintenance procedures for direct support level

Volumes 6 and 7:
  Chapters 16 and 17:
    Maintenance procedures for direct support level
  Chapters 18 through 20:
    Maintenance procedures for general support level

The three appendixes in the manual provide additional information on maintaining the mine dispenser. Appendix A lists references used in the manual. Appendix B contains the list of expendable supplies and materials required to repair the mine dispenser. Appendix C contains the illustrated list of manufactured and assembled items you need when repairing the mine dispenser.

The Glossary defines abbreviations and unusual terms used in the manual. Use this Glossary to find meanings of abbreviations or terms that you do not understand.

There are 12 foldouts at the end of Volume 7. These consist of nine hydraulic system schematics showing nine different modes of hydraulic operation, one electrical schematic, and two wiring diagrams. These foldouts provide you with backup information when you troubleshoot the mine dispenser.

EQUIPMENT CONDITION

Before you start to perform a troubleshooting procedure or maintenance task, check that the mine dispenser is in the following condition:

a. MASTER POWER switch off
b. Engine not running
c. Magazine not loaded
d. Dispenser parked on level ground
e. Four leveling jacks down and locked
f. Hand brakes set

HOW TO USE THE TROUBLESHOOTING PROCEDURES

To help familiarize yourself with the troubleshooting procedures in this manual, practice the following direct support level troubleshooting example.

Practice Fault Symptom: Engine Will Not Crank.

Where do you start?

Turn to the front cover of Volume 1 of the manual for the front cover index Ⓐ . On the right side of the front cover you will find the words "TROUBLESHOOTING (DIRECT SUPPORT)" followed by a reference to page 2-3. Turn to page 2-3. (To find the troubleshooting section quickly, open the manual at the black tab that lines up with the words "TROUBLESHOOTING (DIRECT SUPPORT)" on the front cover.) Read the troubleshooting Introduction on page 2-3.

What troubleshooting procedure do you use to locate the fault?

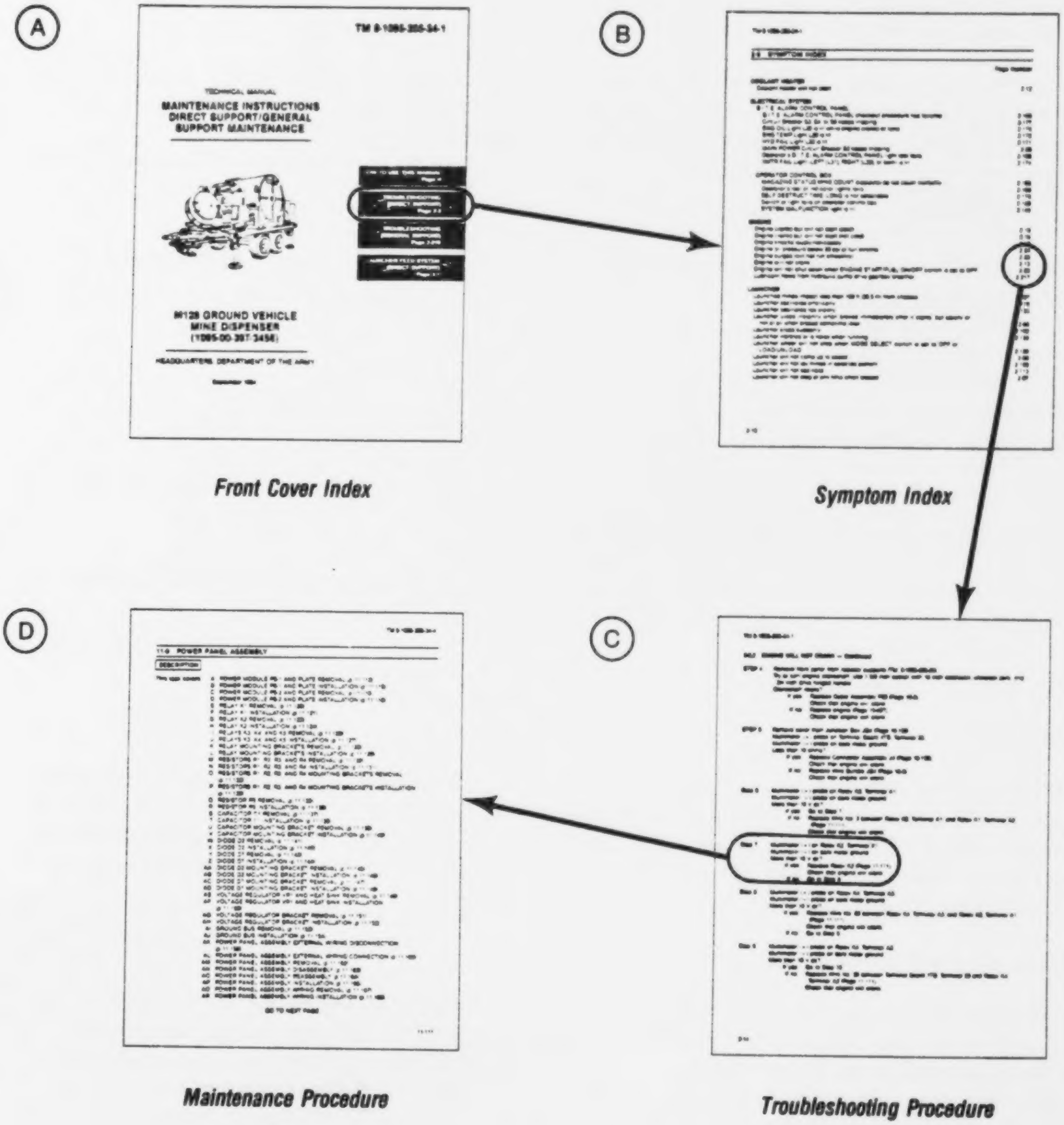
Turn to the Symptom Index Ⓑ on page 2-10. In the Symptom Index, find the listing for equipment category (Engine). Under the category (Engine), find the symptom (Engine Will Not Crank). Next to the symptom is the page number of the troubleshooting procedure Ⓒ that will help you correct the fault. (For Engine Will Not Crank, the page reference is 2-13.) Turn to page 2-13. Perform the troubleshooting procedure, and correct the fault as directed. For example, page 2-14, step 7, tells you to replace Relay K2 (Page 11-111).

GO TO NEXT PAGE

HOW TO USE THE TROUBLESHOOTING PROCEDURES — Continued

What maintenance procedure do you use to replace the faulty part?

Turn to the page referenced (11-111) in the troubleshooting procedure. This is the maintenance procedure Ⓓ you use to replace Relay K2. The maintenance procedure is in step order. Perform each step in order. Do not skip steps. When you have performed the corrective action, you will have replaced Relay K2. Now you perform a functional check of the system to make sure you have fixed the fault. For example, page 2-14, step 7, tells you "Check that engine will crank" after you replace Relay K2.



Front Cover Index

Symptom Index

Maintenance Procedure

Troubleshooting Procedure

HOW TO USE THE MAINTENANCE PROCEDURES

Observe the following rules when you perform a maintenance procedure:

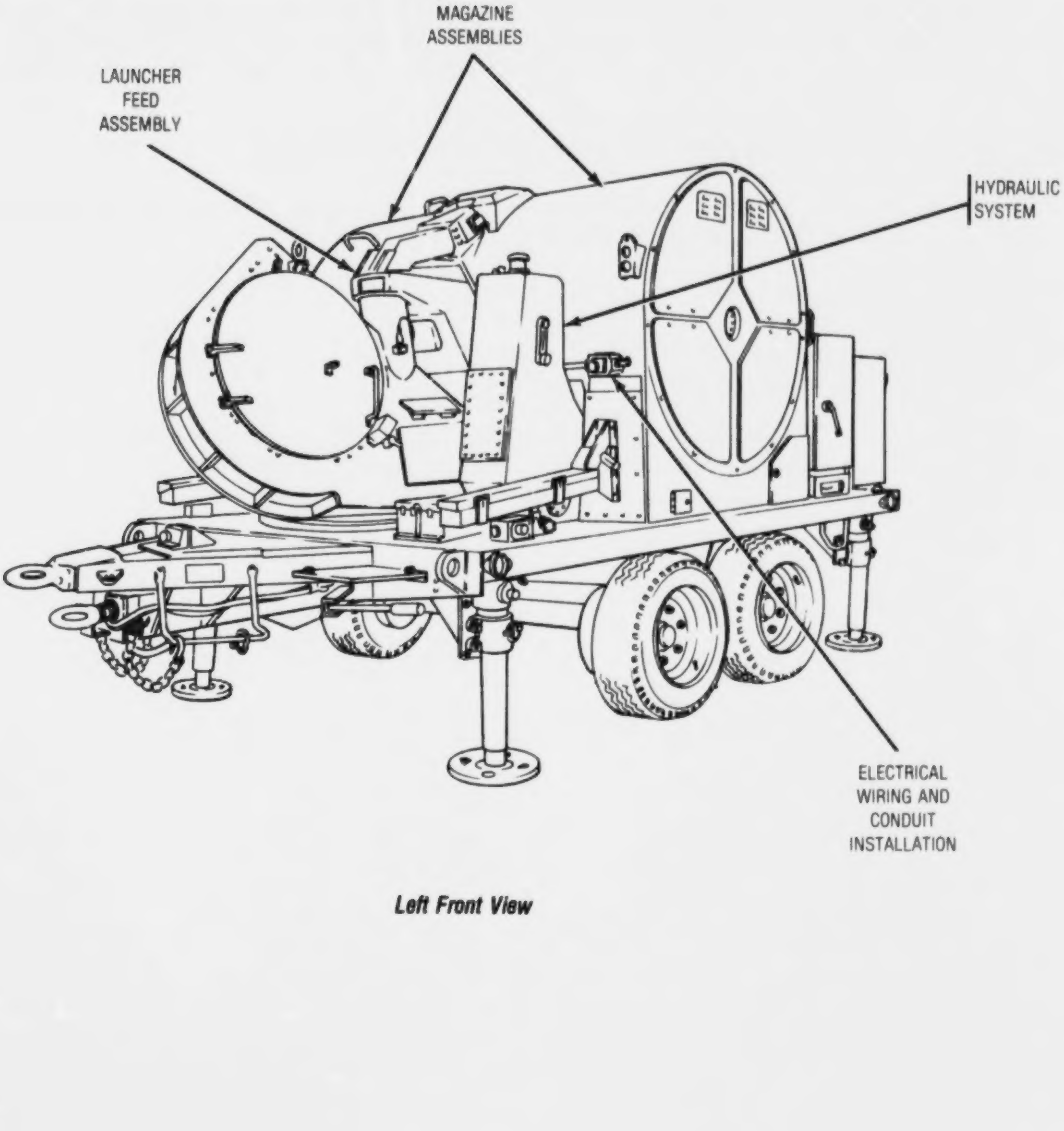
- Read the procedure through before you begin the task.
- Perform all the steps; DO NOT take short cuts.
- Some steps are referenced. In other words, they send you to other maintenance procedures. Return to your original task after you perform any referenced steps.
- Your original task has all the necessary Preliminary Procedures and Follow-On Maintenance listed in it. DO NOT perform Preliminary Procedures and Follow-On Maintenance of the referenced steps.
- Sometimes a referenced step tells you to remove or install hardware "FROM DISPENSER" or "ON DISPENSER." Perform such a task completely: begin with Step 1, and complete all numbered steps.

HOW TO USE THE REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

The RPSTL, TM 9-1095-205-34P, lists the following equipment required for direct and general support level maintenance of the M128 Ground Vehicle Mine Dispenser:

Spares and repair parts
Special tools
Special test, measurement, and diagnostic equipment (TMDE)
Other special support equipment

The RPSTL contains complete instructions for its use. The RPSTL contains cross referenced figures and listings of parts that must be removed for replacement or repair of authorized parts.


MAGAZINE ASSEMBLIES
LAUNCHER FEED ASSEMBLY
HYDRAULIC SYSTEM
ELECTRICAL WIRING AND CONDUIT INSTALLATION

Left Front View

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1 SCOPE

Type of Manual: Direct And General Support Maintenance
Model Number and Equipment Name: M128 Ground Vehicle Mine Dispenser
Purpose of Equipment: Lay minefields using scatterable mines.

1-2 MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS).

1-3 DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

See TM 9-1095-205-10 for procedures and priorities for destruction of Army materiel to prevent enemy use.

1-4 PREPARATION FOR STORAGE OR SHIPMENT

See Preparation for Storage or Shipment (page 2-235) for instructions to prepare M128 Ground Vehicle Mine Dispenser for storage or shipment.

1-5 OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS

This manual uses official nomenclature unless a common name is more suitable. The following Nomenclature Cross-Reference List will tell you which hardware has a common name. Common names are listed in alphabetical order. To find the official nomenclature, read across from the Common Name column to the Official Nomenclature column.

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
Actuator Valve Assembly	Valve Assembly Actuator
Adapter Assembly Air Inlet	Adapter Assembly, Speed Control Switch, Combustion Air Inlet
B.I.T.E./ALARM CONTROL PANEL	B.I.T.E. ALARM Panel Assembly
B.I.T.E. Panel Cover	Electrical Control Cabinet Assembly B.I.T.E. Panel Cover
Bypass Valve	Valve Assembly, Bypass, Electrical
Bulkhead Elbow	Bulkhead Fitting 90°
Cable Assembly J9	Cable Assembly — J9 Launcher Hookup
Cable Assembly P11	Cable Assembly — P11 Vehicle Distance Encoder
Cable Assembly P31	Cable Assembly — P31 RH Magazine Servo Actuator
Cable Assembly P32	Cable Assembly — P32 LH Magazine Servo Actuator
Cable Assembly P41	Cable Assembly — P41 Oscillator Solenoid Valve
Cable Assembly P42	Cable Assembly — P42 Launcher Wheel Solenoid Valve
Cable Assembly P43	Cable Assembly — P43 LH Magazine Bypass Solenoid Valve
Cable Assembly P44	Cable Assembly — P44 RH Magazine Bypass Solenoid Valve
Card Rack	Card Rack Assembly
Cold Start Assembly	Cold Start Installation

GO TO NEXT PAGE

NOMENCLATURE CROSS-REFERENCE LIST—Continued

Common Name	Official Nomenclature
Connector Plug Assembly	Connector Plug, Electrical
Control Station	Pushbutton Control Station Assembly, Modified
Deck-to-Valve Line A Tube Assembly	Tube Assembly, RH Magazine Motor "A" Line
Deck-to-Valve Line B Tube Assembly	Tube Assembly, RH Magazine Motor "B" Line
Diode Board Assembly	Diode Board Circuit Card Assembly
Dowel	Pin, Dowel
Drive Chain Access Door	Access Door, Drive Sprocket Assembly
Electric Fuel Pump Intake Hose Assembly	5/16 I.D. Hose Assembly, Fuel Pump Intake
Electric Fuel Pump to Fuel Strainer Hose Assembly	5/16 I.D. Hose Assembly, Fuel Pump Output
Engine HRS Meter	Hour Meter Assembly
Ether Cylinder-to-Air Intake Tube	Ether Tank-to-Air Intake Tube
Face Panel	Face Panel Fabrication, Operator's Control
Feed Line A Hose Assembly	Hose Assembly, A Feed Line, LH Magazine Pump
Feed Line B Hose Assembly	Hose Assembly, B Feed Line, LH Magazine Pump
Front Disc Brake Tube Assembly Fittings	Adapter; Preformed Packing; Elbow
Fuel Cable	Engine Fuel Shutoff Utility Cable
Fuel Filter to Fuel Injection Pump Hose Assembly	5/16 I.D. Hose Assembly, Fuel Outlet
Fuel Shutoff Clevis	Engine Governor Fuel Shutoff Clevis
Heater Cover	Cover Control Assembly
Indicator Light	Indicator Light Dimming
Indicator Light	Panel Lamp Assembly
Infeed Conveyor Access Door	Access Door, Infeed Conveyor Chain Adjust
Jam Mine Case Drain Tube Assembly	Case Drain, Hydraulic Assembly Jam Mine Prevention

Common Name	Official Nomenclature
Jam Mine Case Drain Tube Assembly Fittings	Pipe-to-Tube Tee; Adapter; Preformed Packing
Launcher Motor Drain Fittings	Swivel Run Tee; Tube-to-Tube Reducer; Reducer; Tube Coupling Nut
Launcher Motor Return Hose Assembly Elbow	Bulkhead Elbow
Left Conveyor Drive Chain	Chain Assembly, Roller
Left Engine Pallet Bulkhead Elbow	Bulkhead Fitting 90°
Left Engine Pallet Bulkhead Tee	Bulkhead Fitting Tee
Left Inboard Guide Rail	Left Inboard Weldment Guide Rail
Left Magazine Motor Line A Tube Assembly	Tube Assembly, LH Magazine Motor "A" Line
Left Magazine Motor Line B Tube Assembly	Tube Assembly, LH Magazine Motor "B" Line
Line A Hose Assembly	Hose Assembly, "A" Feed Line, LH Magazine Motor
Line B Hose Assembly	Hose Assembly, "B" Feed Line, LH Magazine Motor
Lower Center Input Guide	Guide Input — Center (Guide, Input)
Magazine Pump Linkage Adjustment	Hydraulic System Pressure and Speed Adjustment
Manual Bypass Open Tube Assembly	Tube Assembly, Oscillator, Manual Bypass
Manual Bypass Run Tube Assembly	Tube Assembly, Oscillator, Manual Bypass
Motor Drain Tube Assembly	Tube Assembly, Left Magazine, Motor Drain
Name Plate	ID Plate
Oil Filter Assembly Bracket	Cold Start, Fuel Pump, Fuel Filter, and Oil Filter Assembly Bracket
Pivot Block	Pivot Block
Port A Tube	Tube Assembly, 4-way Valve Port "A"
Port B Tube	Tube Assembly, 4-way Valve Port "B"
Portal Shaft	Shaft, Swivel Joint Assembly, Launcher

GO TO NEXT PAGE

NOMENCLATURE CROSS-REFERENCE LIST—Continued

Common Name	Official Nomenclature
Potentiometer	Launcher Position Potentiometer, Electrical Assembly
Pushbutton Control Station Cable Assembly and Switch 3PB	Pushbutton Control Station Assembly, Modified
Pump-to-Relief Valve Tube Assembly	Tube Assembly, Pressure Line Pump-to-Relief Valve
Receptacle Connector	Thru Bulkhead Receptacle
Relief Valve	Dual Relief Valve, Launcher
Relief Valve Drain Tube Assembly	Tube Assembly, Oscillator Relief Valve Drain
Relief Valve-to-Deck Tube Assembly	Tube Assembly, Oscillator Relief Valve-to-Deck
Relief Valve-to-Pump Return Tube Assembly	Tube Assembly, Return Line, Relief Valve-to-Pump
Relief Valve-to-Run Valve Tube Assembly	Tube Assembly, Pressure Line, Relief Valve-to-Launcher
Return Check Valve-to-Motor Fittings	Elbow, Extra Long; Nipple, Pipe Check
Return Line Check Valve	Check valve
Right Engine Pallet Fuel Line Bracket	Bracket, Suction and Return Lines
Right Engine Pallet Fuel Line Bracket Fitting	Bulkhead Fitting 90°
Right Magazine Motor Line A Tube Assembly	Tube Assembly, RH Magazine Motor "A" Line
Right Magazine Motor Line B Tube Assembly	Tube Assembly, RH Magazine Motor "B" Line
Run Valve	Run Valve Electrical Assembly
Run Valve-to-Relief Valve Return Tube Assembly	Tube Assembly, Pressure Line, Relief Valve-to-Launcher
Run Valve-to-Swivel Joint Hose Assembly	Hose Assembly, Pressure Side, Launcher Motor
Servo Actuator	Linear Electro-Mechanical Actuator
Solenoid Switch	Relay Solenoid
Speed Control Shaft Assembly	Shaft Assembly, Speed Control Switch, Drive
Straight Oscillator Circuit Tube Assembly	Tube Assembly, Oscillator Circuit Swivel Joint and Oscillating Drive Assembly

Common Name	Official Nomenclature
Suction and Return Lines Bracket	Right Engine Pallet Line Bracket
Swivel Joint-to-Run Valve Return Hose Assembly	Hose Assembly, Return Pump-to-Launcher Motor
Throttle Cable	Push-Pull Engine Governor Control Cable
Valve Return Tube Assembly	Tube Assembly, Oscillator, 4-way, Valve Return
Valve Seat	Lock Seat, Valve
Valve Supply Tube Assembly	Tube Assembly, Oscillator, 4-way, Valve Supply
Voltage Protector	Protector, Circuit
45 Degree Elbow	Liquidtight 45-degree Angle Connector
90 Degree Elbow	Liquidtight 90-degree Connector

1-6 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

CATEGORY I

A problem that could hurt or kill soldiers, or keep you from doing your mission, needs a Category I EIR. If your mine dispenser has such a problem, report Category I EIR within 24 hours. Report it to Commander, U.S. Army Armament, Munitions and Chemical Command. (See TM 38-750.)

CATEGORY II

If your mine dispenser needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander; U.S. Army Armament, Munitions and Chemical Command; ATTN: DRSMC-MAS (R); Rock Island, IL 61299. We will send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The M128 Ground Vehicle Mine Dispenser:

Has built-in test equipment (B.I.T.E.) to aid checkout and troubleshooting.

Has automotive chassis air hydraulic brake systems and lighting systems.

Has NATO standard slave receptacle.

Is self-powered.

Lays antipersonnel and antitank mines in any combination, or dummy mines.

Lays mines in any of five preset patterns.

Can be operator controlled to lay irregular patterns.

Informs operator when towing speed is too fast for selected mine density.

Stops automatically if mine jams in launcher.

Can clear and unload launcher and magazines by hand in an emergency.

Can be towed, for transport or minelaying, by any vehicle having towing pintle and 15,000 lb (6800 kg) towing capability.

Has coolant heater for extreme cold weather use.

Has swivel mounted, retractable leveling jacks at each corner.

Has operator control box that can be installed at various places on chassis, for loading or testing.

Has dispenser controls for operator who rides in tow vehicle.

Has lockable covers to protect control panels and most stowed equipment.

Has fitted canvas cover.

1-8 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

This paragraph locates and describes major components of the mine dispenser and diesel engine. Locations and descriptions of identification plates are also included.

You locate dispenser directions (left, right, front, and rear) from the engine end of the dispenser. The engine is at the rear; the lunettes (towing eyes) are at the front. As you stand at the rear of the dispenser looking toward the front, the dispenser left is your left. The dispenser right is your right.

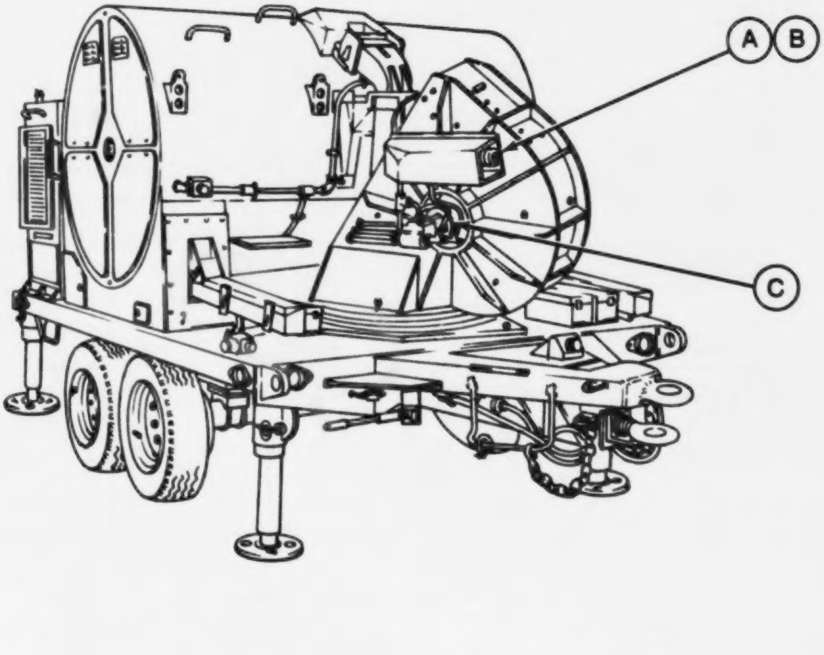
You locate the diesel engine directions (left, right, front, and rear) from the pump drive end of the engine. The pump drive is at the rear, and the cooling fan is at the front. As you stand at the rear and look toward the cooling fan, the engine left is your left. The engine right is your right.

MAJOR COMPONENTS

Ⓐ HYDRAULIC ACCUMULATOR. Mounted on right wall of launcher assembly. Provides emergency hydraulic power for launcher wheel disc brakes.

Ⓑ HYDRAULIC MANIFOLD. Mounted on right wall of launcher assembly. Provides path for fluid incoming to hydraulic accumulator, solenoid valve assembly, and launcher wheel brake assembly. Also provides path for fluid draining from launcher brakes to hydraulic reservoir.

Ⓒ HYDRAULIC MOTOR AND CLUTCH DRIVE. Mounted on right wall of launcher assembly. Powers launcher wheel and tire.



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MAJOR COMPONENTS — Continued

Ⓓ MAGAZINE MAIN DRIVE SPROCKETS. Located inside bottom rear of each magazine. Provide power to rotating reel in each magazine.

Ⓔ LAUNCHER FEED SYSTEM. Located between magazines and launcher assembly. Provides for feeding of mines to launcher assembly from magazines. Consists of twist chute assembly, twin drop chute assembly, twin drop chute support, and outfeed chute and mine counting assembly.

Ⓕ LAUNCHER ASSEMBLY BASEPLATE. Located between launcher assembly and oscillator drive.

Ⓖ INFEED CONVEYORS. Located one in each magazine. Convey mines from infeed chute to reel.

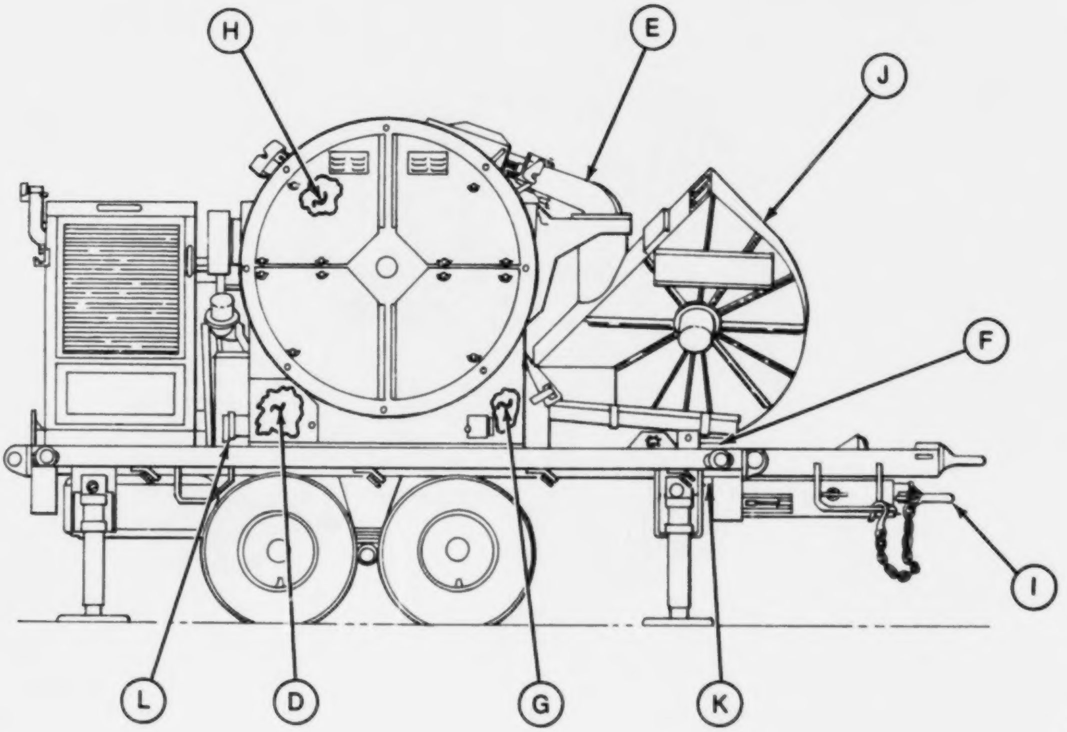
Ⓗ REEL ASSEMBLIES. Located one in each magazine. Move mines around drum helical guides.

Ⓘ REACH TUBE. Located on dispenser front. Used by vehicle with low pintle, to tow dispenser. Provides for mounting of inertia brake actuator.

Ⓙ WHEEL CASE ASSEMBLY. Main component of launcher assembly. Consists of guides (inner, center, and outer) that provide mine path from launcher feed system (input) to launcher muzzle (output).

Ⓚ OSCILLATOR DRIVE. Located under chassis beneath launcher. Drives launcher assembly.

Ⓛ MAGAZINE GEARBOX AND MOTOR ASSEMBLIES. Located one in each magazine. Provide power to each reel, through drive sprocket and chain.



Ⓜ **MAIN CONTROL PANEL ASSEMBLY.** Located on dispenser rear, above throttle and fuel control handles. Provides enclosure for battery and engine indicators, coolant heater controls, master power switch, and electrical wiring.

Ⓝ **COLD START ASSEMBLY AND AIR FILTER SERVICE INDICATOR SYSTEM.** Located at engine rear, above hydraulic pump drive. Provides for engine starting and operation during cold weather and for engine air filtration.

Ⓞ **EXHAUST MANIFOLD.** Mounted on engine right. Provides escape for engine exhaust gases.

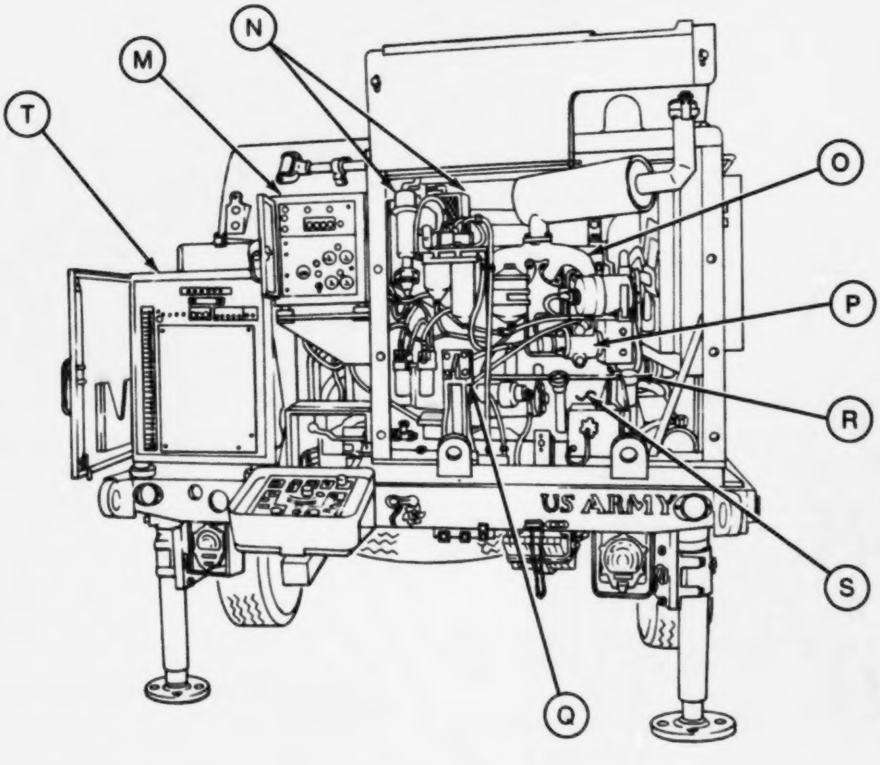
Ⓟ **FUEL INJECTION PUMP.** Mounted on engine right. Delivers measured fuel to fuel injection nozzles.

Ⓠ **BELL HOUSING.** Located on engine rear. Covers flywheel and ring gear. Provides for mounting of pump drive installation.

Ⓡ **FRONT GEAR HOUSING.** Located on engine front. Covers fuel pump gear and idler gears.

Ⓢ **ROTARY OIL PUMP.** Located under engine, inside crankcase oil pan. Pumps oil to engine.

Ⓣ **ELECTRICAL ENCLOSURE.** Located on dispenser rear. Provides enclosure for B.I.T.E./ALARM CONTROL PANEL, terminal panel, card rack, circuit cards, power panel assembly, and electrical wiring.



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MAJOR COMPONENTS — Continued

Ⓤ PUMP DRIVE INSTALLATION. Located on engine rear. Transfers power from engine to three hydraulic pumps: launcher pump, left magazine pump, and right magazine pump.

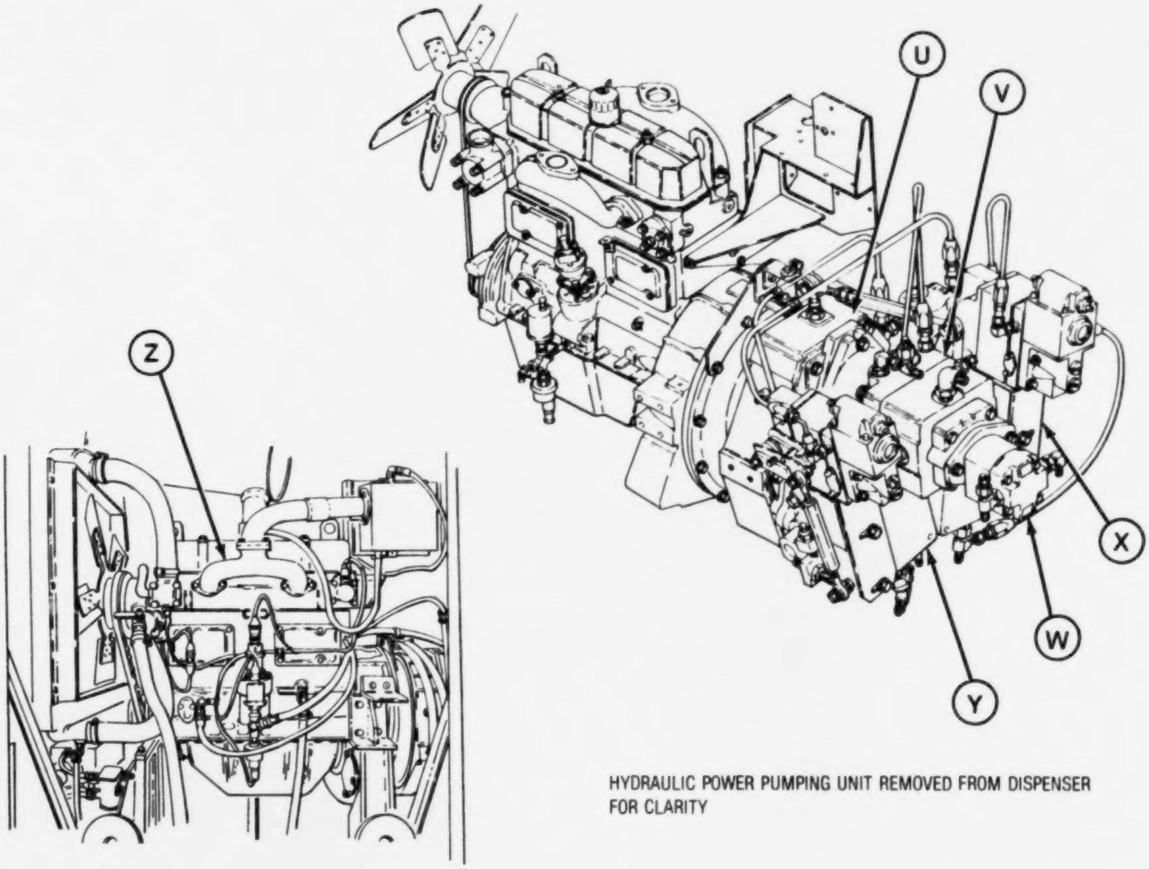
Ⓥ LAUNCHER PUMP. Located on engine rear, behind pump drive installation. Provides hydraulic fluid under pressure to launcher system. Drives oscillator pump.

Ⓦ OSCILLATOR PUMP. Located behind launcher pump. Provides hydraulic fluid under pressure to oscillator system.

Ⓧ LEFT MAGAZINE PUMP ASSEMBLY. Located on engine rear, behind pump drive installation. Provides hydraulic fluid under pressure to left magazine system.

Ⓨ RIGHT MAGAZINE PUMP ASSEMBLY. Located on engine rear, behind pump drive installation. Provides hydraulic fluid under pressure to right magazine system.

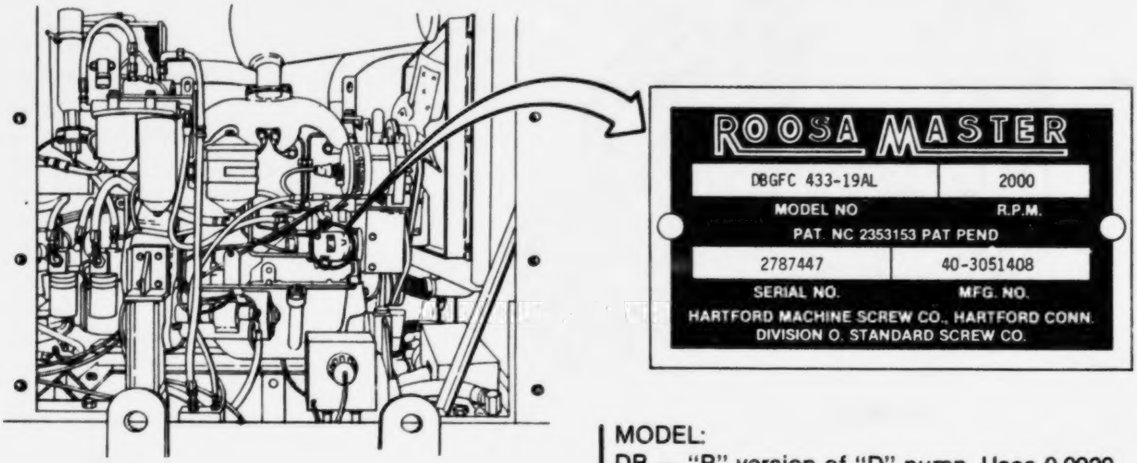
Ⓩ INTAKE MANIFOLD. Mounted on engine left. Provides air intake for engine.



HYDRAULIC POWER PUMPING UNIT REMOVED FROM DISPENSER FOR CLARITY

IDENTIFICATION PLATES

The following diagram shows how to read the fuel injection pump:



ROOSA MASTER

MODEL NO: DBGFC 433-19AL

R.P.M.: 2000

PAT. NC 2353153 PAT PEND

SERIAL NO.: 2787447

MFG. NO.: 40-3051408

HARTFORD MACHINE SCREW CO., HARTFORD CONN.
DIVISION O. STANDARD SCREW CO.

EXAMPLE: Model number DBGFC433-19AL

MODEL:
DB — "B" version of "D" pump. Uses 0.0920 in. (0.2337 cm) diameter distributor rotor.

TYPE OF GOVERNOR:
G — Mechanical

METHOD OF MOUNTING:
F — Flange
V — Vertical

ROTATION:
C — Clockwise
CC — Counterclockwise

ACCESSORY CODE:
AL — Covers special accessories on the pump. These are described in the appropriate Roosa Master pump manual.

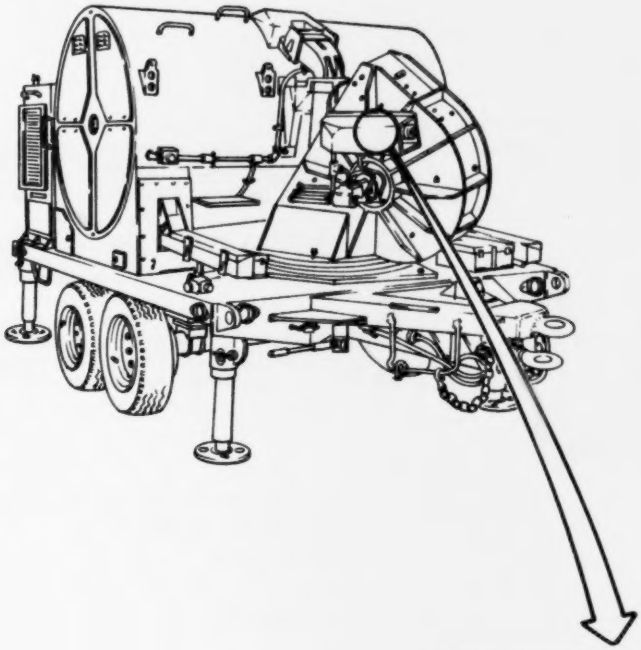
SPECIFICATION CODE:
19 — Must be included in any written reference to the pump.

PLUNGER DIAMETER:
33 — 0.33 in. (0.84 cm)

NUMBER OF CYLINDERS:
4 — 4 cylinders

GO TO NEXT PAGE

IDENTIFICATION PLATES — Continued



MODEL NO. A2A0029A1K

SERIAL NO. E-76-452

OPERATING PRESSURE (MAX.) PSI 3000

CAPACITY CUBIC IN. 29

CAUTION

DESIGNED FOR:

15000 PSI MIN BURST PRESSURE

PRECHARGED TO ______ PSI

6000 PSI PROOFTEST

RELEASE FLUID PRESSURE BEFORE DISCONNECTING PRESSURE LINE. RELEASE GAS AND FLUID PRESSURE BEFORE DISASSEMBLY.

PRECHARGE ONLY WITH DRY INERT GAS SUCH AS HIGH PURITY NITROGEN

INSTALLATION

- MAY BE MOUNTED IN ANY POSITION
- SUPPORT AT END CLOSURES
- DO NOT CLAMP TIGHTLY ON SHELL

SEALS: DES PLAINES, ILL. SERVICE: SEBRING, OHIO

For other identification and instructional plates and stencils, see TM 9-1095-205-10 and TM 9-1095-205-20.

1-9 EQUIPMENT DATA

The following engine specifications provide data for direct support and general support maintenance of the M128 Ground Vehicle Mine Dispenser. For additional data, refer to Organizational Maintenance Instructions (Technical Manual TM 9-1095-205-20).

Bore and stroke	3 3/4 x 4 1/2 in. (9.53 x 11.43 cm)
Piston displacement	198 cu in. (324.5 cc)
Dry weight	772 lb (350.5 kg)
Recommended low idle	800 rpm
Fuel consumption at 2000 rpm	1.60 gal/hr (6.06 L/hr)
Heat rejection to coolant at 2000 rpm	1040 btu/min (1047 kJ/min)
Air consumption at 2000 rpm	100.5 cu ft/min (30.2 cu m/min)
Water pump delivery at 2000 rpm	22.0 gal/min (38.3 L/min)
Crankcase material	Cast iron alloy
Crankcase:	
Casting type	Integral with engine block
Crankshaft material	Steel hardened bearing surfaces
Number of bearings	5 ea
Bearing diameter	2 7/8 in. (7.30 cm)
Bearing lengths:	
Front	1 1/32 in. (2.62 cm)
Center	2 7/8 in. (7.30 cm)
Rear	1 1/32 in. (2.62 cm)
Intermediate	1 1/32 in. (2.62 cm)
Connecting rod:	
Material	Heat treated steel
Bearing diameter	2 3/8 in. (6.03 cm)
Bearing length	1 11/64 in. (2.98 cm)
Rod length	8.0 in. (20.3 cm)
Piston and piston pin:	
Piston material	Heat treated aluminum alloy
Pin material	Steel alloy
Pin type	Full floating
Camshaft:	
Number of bearings	4 ea
Bearing diameter	2 1/16 in. (5.24 cm)
Bearing lengths:	
Front	1 1/16 in. (2.70 cm)
Intermediate	13/16 in. (2.06 cm)
Rear	1 1/16 in. (2.70 cm)
Cylinder head:	
Material	Alloy casting
Type	One piece casting
Valve arrangement	Overhead (E-I-I-E-E-I-I-E)
Valve material	High alloy casting

CHAPTER 2

GROUND VEHICLE MINE DISPENSER, M128

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

2-1 COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

No special tools are authorized for the M128 Ground Vehicle Mine Dispenser.

2-3 REPAIR PARTS

Repair parts are listed and illustrated in the repair parts and special tools list TM 9-1095-205-34P, covering direct support and general support maintenance for this equipment.

Section II. TROUBLESHOOTING (DIRECT SUPPORT)

2-4 INTRODUCTION

A. GENERAL

This section tells you how to troubleshoot the M128 Ground Vehicle Mine Dispenser at Direct Support Maintenance. You start with the symptom of an equipment failure (fault). A list of fault symptoms is contained in the Symptom Index (page 2-10). When troubleshooting the mine dispenser, always start with the Symptom Index.

After completing a troubleshooting task, always make a functional check of the system. This check is to make sure that the fault has been corrected. If the symptom still exists, notify your supervisor.

B. SYMPTOM INDEX

The Symptom Index (page 2-10) lists the symptoms of faults that may occur in the mine dispenser. The list is arranged by system and major component. Each symptom is followed by the page number of the troubleshooting procedure used to correct the fault.

Determine the mine dispenser system or major component in which the symptom has occurred. Locate the symptom in the Symptom Index. Then perform the troubleshooting procedure indicated to correct the fault.

The Symptom Index does not list everything that can go wrong with the mine dispenser. If the fault and corrective action for a symptom are easy to see, the symptom is not listed. For example, things like flat tires and broken tail lights are not listed. Other symptoms are not listed because you do not have the parts, tools, or procedures to fix them. If you find a symptom that is not listed and that you cannot fix, notify your supervisor.

C. TROUBLESHOOTING PROCEDURES

Before troubleshooting the mine dispenser, make the following checks:

- Operating controls were in the correct position for operation when the symptom occurred.
- Organization performed any required troubleshooting.
- Operating controls are in correct position to determine if the symptom still exists.
- Symptom still exists.

Troubleshooting procedures are in step order. Perform the first troubleshooting step, and answer the question following that step. Then go to the step indicated, and perform that step. Continue the steps until you are told what maintenance to perform or until you are referred to higher level maintenance.

Some troubleshooting steps begin with the word step in all capitals (STEP). In such a STEP, you are told to leave equipment open or disconnected. After you correct the fault, review the troubleshooting procedure for the word STEP (in all capitals). Whenever you find STEP, close or connect equipment as required to place the mine dispenser in operating condition.

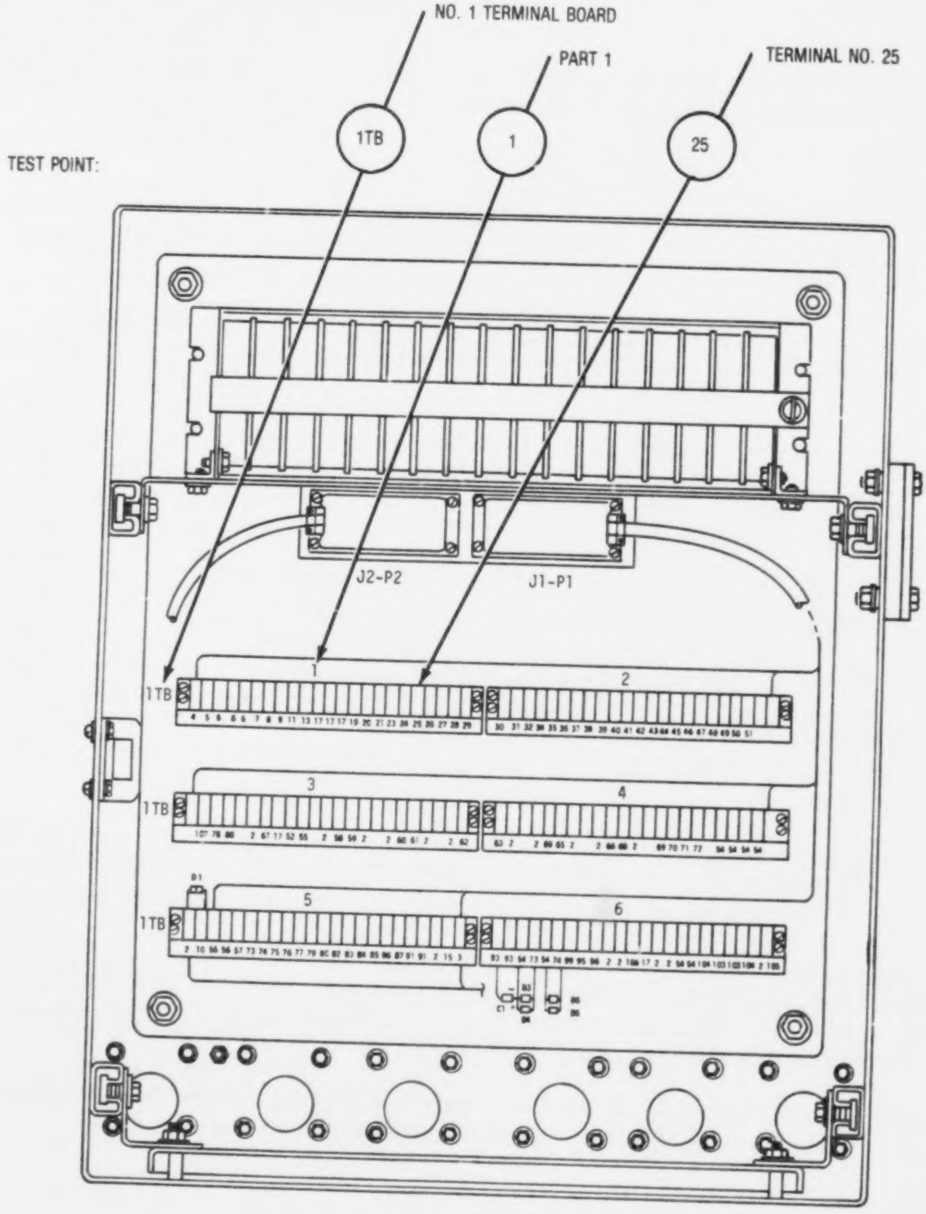
When the mine dispenser is operational, make a functional check of the system. This check is to make sure that the symptom no longer exists. If the symptom still exists, notify your supervisor.

GO TO NEXT PAGE

C. TROUBLESHOOTING PROCEDURES — Continued

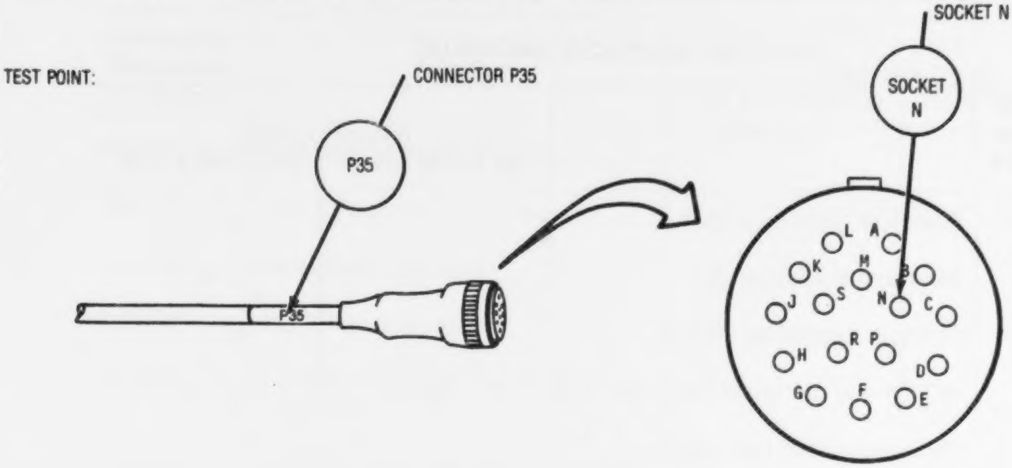
Some troubleshooting procedures have references to test points where multimeter probes are to be placed. These references are electrical circuit designations. The following two examples will help you understand these references.

EXAMPLE NO. 1: Multimeter (+) probe on Terminal Board 1TB, Part I, Terminal 25.


NO. 1 TERMINAL BOARD
PART 1
TERMINAL NO. 25
TEST POINT:
1TB
1
25
J2-P2
J1-P1
1TB
1
2
1TB
3
4
1TB
5
6

B.I.T.E./ALARM CONTROL PANEL (BACP)

EXAMPLE NO. 2: Multimeter (–) probe on P35, Socket N.



The mine dispenser troubleshooting procedures will help you isolate a fault to an assembly, part, or circuit. Replace the assembly or part as directed. Mine dispenser circuits may consist of several parts. Replace only that part of the circuit that contains the fault.

Refer to How to Use this Manual (See page vi) for an example of how to use the troubleshooting procedures to correct a mine dispenser fault.

D. LOCATION OF CONNECTORS/RECEPTACLES

In some troubleshooting procedures, you are told to disconnect or connect an electrical connector from or to a receptacle. For example, "Disconnect P13 from J13." If you want to find out where the connectors/receptacles are located on the dispenser, proceed as follows:

- For location in relation to the dispenser electrical circuits:
  - Electrical Schematic in TM 9-1095-205-20-2, page FO-1.
  - Electrical schematics and wiring diagrams in TM 9-1095-205-34-7, pages FO-1 thru FO-12.
- For general location on the dispenser:
  - Location of Connectors/Receptacles List in TM 9-1095-205-34-1, page 2-5.

E. LOCATION OF CONNECTORS/RECEPTACLES LIST

The following list will help you locate each connector/receptacle on the dispenser. The Location column tells you where the connectors/receptacles are generally located. The Reference Page columns give the first page of the procedures that show the specific locations of the connectors/receptacles. If a connector/receptacle can be found in TM 9-1095-205-34, no reference page is given for it in TM 9-1095-205-20.

GO TO NEXT PAGE

D. LOCATION OF CONNECTORS/RECEPTACLES LIST — Continued

CONNECTORS/RECEPTACLES LOCATION LIST

Connector/ Receptacle Designation	Location	Reference Page	
		TM 9-1095-205-20	TM 9-1095-205-34
P1/J1	Electrical Enclosure JB1	. . .	11-103
P2/J2	Electrical Enclosure JB1	. . .	11-67
P3/J3	Operator control box (OCB)	. . .	10-3
P4/J4	Vehicle end of control cables	8-3	. . .
P5/J5	Operator control box end of control cables	8-3	. . .
P6/J6	Engine wiring harness: on back of MAIN CONTROL PANEL (MCP)	11-3	. . .
P7/J7	Center of left side of engine	15-83	. . .
P9/J9	Launcher internal wiring harness: under launcher by swivel joint	3-25	. . .
P10/J10	Launcher external wiring harness: outside launcher	3-25	. . .
P11/J11	Encoder assembly: underside of chassis	6-3	. . .
P12/J12	Right magazine pulse generator	. . .	7-31
P13/J13	Left magazine pulse generator	. . .	6-47
P14/J14	Engine wiring harness: left side of engine	15-83	. . .
P15/J15	Junction Box JB3	. . .	6-7
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P17/J17	Behind BACP	. . .	11-195
P17A/J17A	Electrical Enclosure JB1	. . .	11-67
P18/J18	Junction Box JB3	. . .	6-7
P19/J19	Inside of MCP	11-17	. . .
P20/J20	Inside and on back of MCP	11-17	. . .

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P21/J21	Left magazine infeed sensor	. . .	6-7
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P25/J25	Left infeed conveyor	. . .	6-7
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P29/J29	On back of main control cabinet	13-35	. . .
P30/J30	Coolant heater	13-35	. . .
P31/J31	Right magazine servo actuator	. . .	15-351
P32/J32	Left magazine servo actuator	. . .	15-307
P33/J33	Engine wiring harness: at alternator	15-83	. . .
P35/J35	On back of main control cabinet	11-3	. . .
P36/J36	Power Module PS-1 in Electrical Enclosure JB1	. . .	11-111
P37/J37	Launcher position potentiometer electrical assembly	. . .	5-49
P38/J38	Launcher external wiring harness: in launcher by brakes	3-25	. . .
P39/J39	Hydraulic reservoir level sensor	. . .	9-213
P41/J41	Under dispenser chassis to rear of rotary actuator (oscillator hydraulic installation)	. . .	9-47
P42/J42	Under dispenser chassis to left of rotary actuator (launcher hydraulic installation)	. . .	9-3

GO TO NEXT PAGE

D. LOCATION OF CONNECTORS/RECEPTACLES LIST — Continued

CONNECTORS/RECEPTACLES LOCATION LIST — Continued

Connector/ Receptacle Designation	Location	Reference Page	
		TM 9-1095-205-20	TM 9-1095-205-34
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P43A/J43A	Left magazine electrical bypass valve	. . .	9-115
P44/J44	Right magazine electrical bypass valve	. . .	9-167
P44A/J44A	Right magazine electrical bypass valve	. . .	9-167
P45/J45	Cold start assist actuator	15-83	. . .
P46/J46	Engine wiring harness: on left side of engine rear	15-83	. . .
P47/J47	Left infeed conveyor	. . .	6-21
P48/J48	Right infeed conveyor	. . .	7-7
P49/J49	Launcher external wiring harness: left side of launcher	3-25	. . .
P50/J50	OCB	. . .	10-17
P51/J51	Launcher internal wiring harness: left jammed mine input sensor	3-25	. . .
P52/J52	Launcher internal wiring harness: inside right access door	3-25	. . .
P53/J53	Launcher external wiring harness: inside top of launcher	3-25	. . .
P54/J54	Launcher external wiring harness: launcher output sensor	3-25	. . .
P55/J55	Launcher external wiring harness: infeed chute	3-25	. . .
P56/J56	Launcher external wiring harness: accumulator	3-25	. . .
P80/J80	Electrical Enclosure JB1	. . .	11-5

F. LOCATION OF TEST POINTS

In some troubleshooting procedures, you are told to use a pressure gage on a test point (TP). For example, "Connect HSTRU pressure gage to Test Point TP15." The hydraulic system schematics show you the locations of the TPs. These schematics are at the end of Volume 7 (pages FO-1 thru FO-9). To determine the schematic you need, read the schematic titles listed in the Table of Contents for Volume 7.

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  - Circuit Breaker S3, S4, or S5 keeps tripping ... 2-177
  - ENG OIL Light L30 is lit while engine cranks or runs ... 2-173
  - ENG TEMP Light L29 is lit ... 2-172
  - HYD FAIL Light L33 is lit ... 2-171
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  - Operator's B.I.T.E./ALARM CONTROL PANEL light test fails ... 2-168
  - XMTR FAIL Light (LEFT [L31], RIGHT [L32], or both) is lit ... 2-174

- OPERATOR CONTROL BOX
  - MAGAZINE STATUS MINE COUNT display(s) do not count correctly ... 2-185
  - Operator's test of indicator lights fails ... 2-166
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- Engine oil pressure below 20 psi at full throttle ... 2-24
- Engine surges (will not run smoothly) ... 2-25
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- Engine will not shut down when ENGINE START/FUEL ON/OFF switch is set to OFF ... 2-23
- Lubricant flows from hydraulic pump drive gearbox breather ... 2-217

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Magazine will not dispense mines 2-65
Magazine will not return mines to infeed chute 2-44
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Magazine will not stop when full or when advancing mines: mines fall from outfeed chute onto chassis deck 2-54
Magazine will not stop when LOAD ADVANCE/UNLOAD pushbutton is released 2-61
Magazine will not stop when returning mines to infeed chute 2-57
Magazine will not unload mines to infeed chute 2-52

2-6 TROUBLESHOOTING PROCEDURES (DIRECT SUPPORT)

This paragraph contains procedures for troubleshooting authorized at direct support level maintenance.

2-6.1 COOLANT HEATER WILL NOT START

INITIAL SETUP

References:

ENGINE FUEL HOSES, FITTINGS, AND FUEL FILTER BRACKET (Page 15-91)
FUEL SYSTEM LINES AND FITTINGS (Page 13-19)
FUEL TANK ASSEMBLY (Page 13-3)

Inspect fuel shutoff valve for damage. Replace if damaged (Page 13-3).
Inspect fuel tank-to-pallet suction line tube assembly for damage. Replace if damaged (Page 13-19).
Replace left engine pallet fittings (Page 15-91).
Check coolant heater will start.

END OF TASK

2-6.2 ENGINE WILL NOT CRANK

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Tools:
3/4 inch drive socket set
5120-00-204-1199:
1 5/8 inch socket
16 inch extension
Universal joint
Hinged handle

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
ENGINE REMOVAL AND INSTALLATION (Page 15-487)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
POWER PANEL ASSEMBLY (Page 11-111)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Remove cover from B.I.T.E/ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
Attempt to start engine (TM 9-1095-205-10).
ENGINE START Lamp L51 on BACP come on?
If yes: Go to STEP 2.
If no: Go to STEP 5.

STEP 2.

WARNING

Battery posts and cables touched by metal objects can short circuit and burn you. Do not wear jewelry, including watches, or let ID tags hang down, when working on the electrical system. Keep tools away from posts, wires, and terminals.

Open BACP (Page 11-195).
Multimeter (+) probe on Relay K2, Terminal A2.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 3.
If no: Go to Step 6.

Step 3. Multimeter (+) probe on Terminal 1TB5.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to STEP 4.
If no: Replace Wire No. 5 between Terminal 1TB5 and Relay K2, Terminal A2 (Page 11-111).
Check that engine will crank.

2-6.2 ENGINE WILL NOT CRANK — Continued

STEP 4. Remove front panel from radiator supports (TM 9-1095-205-20).
Try to turn engine crankshaft. Use 1 5/8 inch socket with 16 inch extension, universal joint, and 3/4 inch drive hinged handle.
Crankshaft rotate?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check that engine will crank.
If no: Replace engine (Page 15-487).
Check that engine will crank.

STEP 5. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 25.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check that engine will crank.
If no: Replace Wire Bundle JB4 (Page 16-3).
Check that engine will crank.

Step 6. Multimeter (+) probe on Relay K2, Terminal A1.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 7.
If no: Replace Wire No. 3 between Relay K2, Terminal A1, and Relay K1, Terminal A2 (Page 11-111).
Check that engine will crank.

Step 7. Multimeter (+) on Relay K2, Terminal X1.
Multimeter (−) on bare metal ground.
More than 18 V dc?
If yes: Replace Relay K2 (Page 11-111).
Check that engine will crank.
If no: Go to Step 8.

Step 8. Multimeter (+) probe on Relay K4, Terminal A3.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Wire No. 86 between Relay K4, Terminal A3, and Relay K2, Terminal A1 (Page 11-111).
Check that engine will crank.
If no: Go to Step 9.

Step 9. Multimeter (+) probe on Relay K4, Terminal A2.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 10.
If no: Replace Wire No. 25 between Terminal Board 1TB, Terminal 25 and Relay K4, Terminal A2 (Page 11-111).
Check that engine will crank.

Step 10. Multimeter (+) probe on Relay K4, Terminal X1.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Rotary Switch SW14 (Page 11-195).
Check that engine will crank.
If no: Replace Relay K4 (Page 11-111).
Check that engine will crank.

END OF TASK

2-6.3 ENGINE CRANKS BUT WILL NOT START (NOT COLD)

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
CYLINDER HEAD ASSEMBLY (Page 15-219)

References — Continued:
FUEL INJECTION PUMP (Page 15-161)
FUEL NOZZLE ASSEMBLIES (Page 15-187)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. MASTER POWER SWITCH on MAIN CONTROL PANEL ON.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) to FUEL ON.
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
ENGINE FUEL ON Lamp L50 on BACP lit?
If yes: Go to Step 2.
If no: Go to STEP 7.

Step 2. Multimeter (+) probe on Lead 51 on fuel injection pump.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 3.
If no: Go to Step 8.

Step 3. Check fuel injection pump timing (Page 15-161).
Fuel injection pump timed?
If yes: Go to STEP 4.
If no: Time fuel injection pump (Page 15-161).
Check engine starts.

STEP 4. Remove cylinder head valve cover from engine (TM 9-1095-205-20).
Check valves for freedom of movement.
Valves move freely?
If yes: Go to Step 5.
If no: Replace or repair valves as required (Page 15-219).
Check engine starts.

Step 5. Check valve adjustment (TM 9-1095-205-20).
Valves adjusted?
If yes: Go to Step 6.
If no: Adjust valves (TM 9-1095-205-20).
Check engine starts.

Step 6. Test cylinder compression (Page 15-187).
Pass test?
If yes: Replace fuel injection pump (Page 15-161).
Check engine starts.
If no: Replace or repair valves or cylinder head as required (Page 15-219).
Check engine starts.

STEP 7. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 26.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check engine starts.
If no: Go to STEP 9.

Step 8. Lamp L67 on BACP lit?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check engine starts.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check engine starts.

STEP 9. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 26.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check engine starts.
If no: Replace Connector Assembly J4 (Page 16-139).
Check engine starts.

END OF TASK

2-6.4 ENGINE CRANKS BUT WILL NOT START (COLD)

INITIAL SETUP

Tools:
General mechanic's tool kit
5180-00-177-7033:
3/8 inch open end wrench
7/16 inch open end wrench

Reference:
COLD START ASSEMBLY AND AIR FILTER SERVICE INDICATOR SYSTEM (Page 15-3)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) OFF.
Remove ether fuel cylinder from fuel filter bracket (Page 15-3).
Shake cylinder.
Ether in cylinder?
If yes: Go to Step 2.
If no: Replace ether fuel cylinder (Page 15-3).
Check that engine starts.

Step 2. MASTER POWER switch on MCP ON.
ENGINE START/FUEL ON/OFF switch on OCB to START.
Actuating pin on cold start actuator valve pop up?
If yes: Go to STEP 3.
If no: Replace cold start actuator valve (Page 15-3).
Check that engine starts.

STEP 3.

WARNING

Fuel can catch fire and burn you. NO SMOKING. Wipe up spilled fuel.

MASTER POWER switch on MCP off.
ENGINE START/FUEL ON/OFF switch on OCB OFF.
Install ether fuel cylinder on fuel filter bracket (Page 15-3).
Disconnect ether tank to air intake tube from jet assembly. Use 3/8 inch and 7/16 inch open end wrenches.
MASTER POWER switch on MCP ON.
ENGINE START/FUEL ON/OFF switch on OCB to START.
Ether come out of tube?
If yes: Replace jet assembly (Page 15-3).
Check that engine starts.
If no: Replace ether tank to air intake tube (Page 15-3).

END OF TASK

2-6.5 ENGINE KNOCKS LOUDLY/NOTICEABLY

INITIAL SETUP

Tools:
General mechanic's tool kit
5180-00-177-7033:
9/16 inch open end wrench
Goggles 4240-00-269-7912

References:
TM 9-1095-205-10
TM 9-1095-205-20
CYLINDER HEAD ASSEMBLY (Page 15-219)
ENGINE FUEL HOSES, FITTINGS, AND FUEL FILTER BRACKET (Page 15-91)
ENGINE REMOVAL AND INSTALLATION (Page 15-487)
FUEL INJECTION PUMP (Page 15-161)
FUEL NOZZLE ASSEMBLIES (Page 15-187)
FUEL TANK ASSEMBLY (Page 13-3)
ROTARY OIL PUMP STRAINER (Page 15-513)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. Engine oil pressure between 40 and 60 psi?
If yes: Go to STEP 3.
If no: Go to STEP 2.

STEP 2. Stop engine (TM 9-1095-205-20).
Remove rotary oil pump strainer from oil pump (Page 15-513).
Strainer clogged or damaged?
If yes: Clean or replace strainer (Page 15-513).
Check engine does not knock.
If no: Refer to higher level maintenance.

STEP 3.

WARNING

Fuel can catch fire and burn you. NO SMOKING. Wipe up spilled fuel.

Disconnect return to tank pallet tube assembly from fuel tank (Page 13-3).
Fuel being returned to fuel tank?
If yes: Go to STEP 4.
If no: Replace or repair fuel return hoses as required (Page 15-91).
Check engine does not knock.

2-6.5 ENGINE KNOCKS LOUDLY/NOTICEABLY — Continued

STEP 4.

WARNING

Hot coolant can burn you. Turn radiator cap slowly to let out pressure.

• • • •

Hot coolant can burn you. Do not get hot coolant on your skin.

Remove radiator cap from radiator (TM 9-1095-205-10).
Start engine (TM 9-1095-205-10).
Air or exhaust bubbles released from coolant as engine runs?
If yes: Replace cylinder head gasket (Page 15-219).
Check engine does not knock.
If no: Go to Step 5.

Step 5.

WARNING

Engine parts could hurt you. Stay clear of moving parts when engine is running.

• • • •

Parts rotating at high speeds can harm you. Keep objects away from parts rotating at high speeds.

Stop engine (TM 9-1095-205-20).
Install radiator cap on radiator (TM 9-1095-205-10).
Start engine (TM 9-1095-205-10).
Check engine speed at full throttle (Page 15-161).
Engine speed below 2210 rpm?
If yes: Go to Step 6.
If no: Replace fuel injection pump (Page 15-161).
Check engine does not knock.

Step 6. Stop engine (TM 9-1095-205-20).
Check fuel injection pump timing (Page 15-161).
Pump timing correct?
If yes: Go to STEP 7.
If no: Time fuel injection pump (Page 15-161).
Check engine does not knock.

STEP 7. Remove valve cover from cylinder head (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
Valves move freely?
If yes: Go to Step 8.
If no: Repair or replace valves or cylinder head as required (Page 15-219).
Check engine does not knock.

Step 8. Check valve adjustment (TM 9-1095-205-20).
Valves adjusted properly?
If yes: Go to STEP 9.
If no: Adjust valves (TM 9-1095-205-20).
Check engine does not knock.

STEP 9.

WARNING

Fuel under pressure can hurt you. DON'T REMOVE tube nuts from fuel injectors while engine is running. Wear safety goggles when you check for leaks.

Stop engine (TM 9-1095-205-20).
Install valve cover on cylinder head (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
Loosen fuel feed tube nut at Injector No. 1 until fuel flows freely. Use 9/16 inch open end wrench.
Engine performance affected?
If yes: Go to STEP 10.
If no: Replace Injector No. 1 (Page 15-187).
Check engine does not knock.

STEP 10. Stop engine (TM 9-1095-205-20).
Tighten fuel feed tube nut at Injector No. 1. Use 9/16 inch open end wrench.
Start engine (TM 9-1095-205-10).
Loosen fuel feed tube nut at Injector No. 2 until fuel flows freely. Use 9/16 inch open end wrench.
Engine performance affected?
If yes: Go to STEP 11.
If no: Replace Injector No. 2 (Page 15-187).
Check engine does not knock.

STEP 11. Stop engine (TM 9-1095-205-20).
Tighten fuel feed tube nut at Injector No. 2. Use 9/16 inch open end wrench.
Start engine (TM 9-1095-205-10).
Loosen fuel feed tube nut at Injector No. 3 until fuel flows freely. Use 9/16 inch open end wrench.
Engine performance affected?
If yes: Go to STEP 12.
If no: Replace Injector No. 3 (Page 15-187).
Check engine does not knock.

STEP 12. Stop engine (TM 9-1095-205-20).
Tighten fuel feed tube nut at Injector No. 3. Use 9/16 inch open end wrench.
Start engine (TM 9-1095-205-10).
Loosen fuel feed tube nut at Injector No. 4 until fuel flows freely. Use 9/16 inch open end wrench.
Engine performance affected?
If yes: Go to STEP 13.
If no: Replace Injector No. 4 (Page 15-187).
Check engine does not knock.

2-6.5 ENGINE KNOCKS LOUDLY/NOTICEABLY — Continued

STEP 13. Stop engine (TM 9-1095-205-20).
Remove cylinder head from engine (Page 15-219).
Inspect each cylinder for foreign material.
Foreign material in any cylinder?
If yes: Remove foreign material.
If cylinder walls are damaged, replace engine (Page 15-487).
If cylinder walls are not damaged, install cylinder head on engine (Page 15-219).
Check engine does not knock.
If no: Replace engine (Page 15-487).
Check engine does not knock.

END OF TASK

2-6.6 ENGINE WILL NOT SHUT DOWN WHEN ENGINE START/FUEL ON/OFF SWITCH IS SET TO OFF

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Tools:
General mechanic's tool kit
5180-00-177-7033:
6 inch adjustable wrench

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-10
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
FUEL INJECTION PUMP (Page 15-161)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Open engine hinged panel (TM 9-1095-205-10).
Disconnect Lead 51 from fuel injection pump. Use 6 inch adjustable wrench.
Multimeter (+) probe on Lead 51.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check engine stops with ENGINE START/FUEL ON/OFF switch on operator control box (OCB) OFF.
If no: Go to STEP 2.

STEP 2. MASTER POWER switch on MAIN CONTROL PANEL ON.
More than 18 V dc?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check engine stops with ENGINE START/FUEL ON/OFF switch on OCB OFF.
If no: Replace fuel injection pump (Page 15-161).
Check engine stops with ENGINE START/FUEL ON/OFF switch on OCB OFF.

END OF TASK

2-6.7 ENGINE OIL PRESSURE BELOW 20 PSI AT FULL THROTTLE

INITIAL SETUP

References:
TM 9-1095-205-20
ENGINE REMOVAL AND INSTALLATION
(Page 15-487)
ROTARY OIL PUMP STRAINER (Page 15-513)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Stop engine (TM 9-1095-205-20).
Remove rotary oil pump strainer from rotary oil pump (Page 15-513).
Strainer clogged or damaged?
  If yes: Clean or replace rotary oil pump strainer (Page 15-513).
  Check that engine oil pressure gage reads more than 20 psi.
  If no: Replace engine (Page 15-487).
  Check that engine oil pressure gage reads more than 20 psi.

END OF TASK

2-6.8 ENGINE SURGES (WILL NOT RUN SMOOTHLY)

INITIAL SETUP

Tools:
Goggles 4240-00-269-7912

References:
TM 9-1095-205-10
TM 9-1095-205-20
CYLINDER HEAD ASSEMBLY (Page 15-219)
ENGINE REMOVAL AND INSTALLATION (Page 15-487)
FUEL INJECTION PUMP (Page 15-161)
FUEL NOZZLE ASSEMBLIES (Page 15-187)
LOUVER ASSEMBLY (Page 15-431)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. Check shutters on louver assembly (Page 15-431).
Shutters open?
If yes: Go to Step 2.
If no: Go to STEP 3.

Step 2. Close and open shutters by hand.
Shutters move freely?
If yes: Replace louver control assembly (Page 15-431).
Check engine does not surge.
If no: Repair louver assembly (Page 15-431).
Check engine does not surge.

STEP 3.

WARNING

Hot coolant can burn you. Turn radiator cap slowly to let out pressure.

Remove cap from radiator (TM 9-1095-205-10).
Start engine (TM 9-1095-205-10).
Exhaust gas released from coolant?
If yes: Replace cylinder head gasket (Page 15-219).
Check engine does not surge.
If no: Go to Step 4.

Step 4. Stop engine (TM 9-1095-205-20).
Check fuel injection pump timing (Page 15-161).
Fuel injection pump timed correctly?
If yes: Go to Step 5.
If no: Time fuel injection pump (Page 15-161).
Check engine does not surge.

2-6.3 ENGINE SURGES (WILL NOT RUN SMOOTHLY) — Continued

Step 5. Test cylinder compression (Page 15-187).
Cylinder pass test?
If yes: Go to STEP 6.
If no: Go to STEP 10.

STEP 6.

WARNING

Fuel under pressure can hurt you. DON'T REMOVE tube nuts from fuel injectors while engine is running. Wear safety goggles when you check for leaks.

• • • •

Fuel can catch fire and burn you. NO SMOKING. Wipe up spilled fuel.

Start engine (TM 9-1095-205-10).
Loosen fuel injection tube at No. 1 fuel nozzle assembly until fuel flows steadily from tube (Page 15-187).
Engine performance affected?
If yes: Go to STEP 7.
If no: Replace No. 1 fuel nozzle assembly (Page 15-187).
Check engine does not surge.

STEP 7. Tighten fuel injection tube at No. 1 fuel nozzle assembly (Page 15-187).
Loosen fuel injection tube at No. 2 fuel nozzle assembly until fuel flows steadily from tube (Page 15-187).
Engine performance affected?
If yes: Go to STEP 8.
If no: Replace No. 2 fuel nozzle assembly (Page 15-187).
Check engine does not surge.

STEP 8. Tighten fuel injection tube at No. 2 fuel nozzle assembly (Page 15-187).
Loosen fuel injection tube at No. 3 fuel nozzle assembly until fuel flows steadily from tube (Page 15-187).
Engine performance affected?
If yes: Go to STEP 9.
If no: Replace No. 3 fuel nozzle assembly (Page 15-187).
Check engine does not surge.

STEP 9. Tighten fuel injection tube at No. 3 fuel nozzle assembly (Page 15-187).
Loosen fuel injection tube at No. 4 fuel nozzle assembly until fuel flows steadily from tube (Page 15-187).
Engine performance affected?
If yes: Replace fuel injection pump (Page 15-161).
Check engine does not surge.
If no: Replace No. 4 fuel nozzle assembly (Page 15-187).
Check engine does not surge.

STEP 10. Remove valve cover from cylinder head (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
Valves move freely?

If yes: Go to STEP 11.
If no: Repair or replace valves, push rods, or cylinder head as required (Page 15-219).
Check engine does not surge.

STEP 11. Stop engine (TM 9-1095-205-20).
Remove cylinder head from engine (Page 15-219).
Check valve seating (Page 15-219).
Valves seated properly?
If yes: Replace engine (Page 15-487).
Check engine does not surge.
If no: Repair or replace valves or cylinder head (Page 15-219).
Check engine does not surge.

END OF TASK

2-6.9 MAIN POWER CIRCUIT BREAKER S2 KEEPS TRIPPING

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Tools:
General mechanic's tool kit
5180-00-177-7033:
1/4 inch flat tip screwdriver

Materials/Parts:
Electrical tape, Item 21, Appendix B

Personnel Required:
Electrical repairer

References:
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CARD RACK ASSEMBLY (Page 11-103)
CIRCUIT CARD ASSEMBLY (Page 11-265)
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
JUNCTION BOX JB4 AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Open B.I.T.E/ALARM CONTROL PANEL (BACP) (Page 11-5).
Disconnect Wire No. 6 from lower terminal of Circuit Breaker 1CB. Use 1/4 inch flat tip screwdriver.
Multimeter (+) probe on Wire No. 6.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Go to STEP 2.
If no: Replace Circuit Breaker 1CB (Page 11-195).
Check that Circuit Breaker S2 does not trip.

STEP 2. Connect Wire No. 6 to lower terminal of Circuit Breaker 1CB. Use 1/4 inch flat tip screwdriver.
Disconnect two Wires No. 6 from Terminal Board 1TB, Part I, Terminal 6. Use 1/4 inch flat tip screwdriver.
Insulate two Wires No. 6. Use electrical tape.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin E11.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P1 (Page 11-67).
Check that Circuit Breaker S2 does not trip.
If no: Go to Step 3.

Step 3. Multimeter (+) probe on P1, Pin G11.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P1 (Page 11-67).
Check that Circuit Breaker S2 does not trip.
If no: Go to Step 4.

Step 4. Multimeter (+) probe on J1, Socket E11.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Go to STEP 5.
If no: Go to STEP 7.

STEP 5. Remove Circuit Card Assembly CCA2 (Page 11-265).
Multimeter (+) probe on J1, Socket E11.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check that Circuit Breaker S2 does not trip.
If no: Go to Step 6.

Step 6. Multimeter (+) probe on J1, Socket G11.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check that Circuit Breaker S2 does not trip.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check that Circuit Breaker S2 does not trip.

STEP 7. Connect P1 to J1.
Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin A.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly J80 (Page 11-67).
Check that Circuit Breaker S2 does not trip.
If no: Go to Step 8.

Step 8. Multimeter (+) probe on P80, Socket A.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Go to STEP 9.
If no: Go to STEP 11.

STEP 9. Disconnect Wire No. 6 from Switch SW24, Terminal 3. Use 1/4 inch flat tip screwdriver.
Multimeter (+) probe on Switch SW24, Terminal 3.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check that Circuit Breaker S2 does not trip.
If no: Go to STEP 10.

STEP 10. Connect Wire No. 6 to Switch SW24, Terminal 3. Use 1/4 inch flat tip screwdriver.
Disconnect wire from Switch SW24, Terminal 2. Use 1/4 inch flat tip screwdriver.
Multimeter (+) probe on wire disconnected from Switch SW24, Terminal 2.
Multimeter (–) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Switch SW14 (Page 11-195).
Check that Circuit Breaker S2 does not trip.
If no: Replace Switch SW24 (Page 11-195).
Check that Circuit Breaker S2 does not trip.

2-6.9 MAIN POWER CIRCUIT BREAKER S2 KEEPS TRIPPING — Continued

STEP 11. Connect P80 to J80.
Disconnect P35 from J35.
Multimeter (+) probe on P35, Socket D.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check that Circuit Breaker S2 does not trip.
If no: Go to STEP 12.

STEP 12. Connect P35 to J35.
Disconnect P4 from J4.
Multimeter (+) probe on J4, Socket M.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Go to STEP 13.
If no: Replace Wire No. 6 between Circuit Breaker 1CB and Terminal Board 1TB, Part 1, Terminal 6 (Pages 11-195 and 11-49).
Check that Circuit Breaker S2 does not trip.

STEP 13. Remove cover from Junction Box JB4 (Page 16-139).
Disconnect two leads from Terminal Board 4TB, Terminal 6. Use 1/4 inch flat tip screwdriver.
Multimeter (+) probe on Terminal Board 4TB, Terminal 6.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Junction Box JB4 (Page 16-139).
Check that Circuit Breaker S2 does not trip.
If no: Replace Connector Assembly J4 (Page 16-139).
Check that Circuit Breaker S2 does not trip.

END OF TASK

2-6.10 MAGAZINE WILL NOT ACCEPT MINES

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
  Pressure gage (2)
Multimeter 6625-00-999-6282

Personnel Required:

Electrical repairer
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
HYDRAULIC SYSTEM SCHEMATIC: ENGINE ON, NO EQUIPMENT OPERATING (FO-1)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
LEFT GEARBOX AND MOTOR ASSEMBLY (Page 6-47)
LEFT INFEED CONVEYOR AND LEFT END COVER ASSEMBLIES (Page 6-21)
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT MAGAZINE HYDRAULIC INSTALLATION (Page 9-115)
LEFT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-307)

References — Continued:

LEFT MAGAZINE REEL ASSEMBLY (Page 6-83)
LEFT MAIN DRIVE SPROCKET ASSEMBLY (Page 6-103)
MAGAZINE PUMPS LINKAGE ADJUSTMENT (Page 15-401)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
RIGHT GEARBOX AND MOTOR ASSEMBLY (Page 7-31)
RIGHT INFEED CONVEYOR AND RIGHT END COVER ASSEMBLIES (Page 7-7)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MAGAZINE HYDRAULIC INSTALLATION (Page 9-167)
RIGHT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-351)
RIGHT MAGAZINE REEL ASSEMBLY (Page 7-71)
RIGHT MAIN DRIVE SPROCKET ASSEMBLY (Page 7-91)
SERVO ACTUATOR HYDRAULIC LINE FILTER ASSEMBLIES AND FILTER BRACKET (Page 15-409)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Step 1. MAGAZINE LEFT [RIGHT] LOAD Lamp L24 [Lamp L26] on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to STEP 2.
If no: Go to Step 3.

2-6.10 MAGAZINE WILL NOT ACCEPT MINES — Continued

STEP 2. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Open outfeed chute cover (TM 9-1095-205-10).
Check left [right] output proximity sensor arm (Page 3-15).
Arm in front of sensor?
If yes: Replace left [right] output proximity sensor arm (Page 3-15).
If no: Go to STEP 5.

Step 3. Remove cover from BACP (TM 9-1095-205-20).
D02 Lamp L39 on BACP lit?
If yes: Go to STEP 4.
If no: Go to Step 8.

STEP 4. MASTER POWER switch on MCP off.
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will accept mines.
If no: Go to STEP 9.

STEP 5. Close outfeed chute cover (TM 9-1095-205-10).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Open engine hinged panel (TM 9-1095-205-10).
Press and hold left [right] servo actuator manual override button (Page 15-307 [Page 15-351]).
Left [right] magazine turn?
If yes: Go to STEP 6.
If no: Go to Step 10.

STEP 6. Open left [right] magazine mud guard lid (TM 9-1095-205-10).
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 70 [Terminal 72].
Helper press left [right] infeed proximity sensor lever (Page 6-37 [Page 7-21]).
More than 1 V dc?
If yes: Go to STEP 7.
If no: Go to Step 16.

STEP 7. Disconnect P32 [P31] from J32 [J31].
Multimeter (+) probe on P32 [P31], Socket A.
Multimeter (−) probe on P32 [P31], Socket B.
Helper press left [right] infeed proximity sensor lever (Page 6-37 [Page 7-21]).
More than 5 V dc?
If yes: Replace left [right] servo actuator (Page 15-307 [Page 15-351]).
Check magazine will accept mines.
If no: Replace left [right] Magazine Servo Actuator Cable Assembly P32 [P31] (Page 16-3).
Check magazine will accept mines.

STEP 8. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 30.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
If no: Go to STEP 19.

STEP 9. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will accept mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check that magazine will accept mines.

Step 10. Check left [right] magazine servo actuator and pump linkages (Page 15-307 [Page 15-351]).
Actuator and pump linkages properly assembled and secured?
If yes: Go to Step 11.
If no: Repair magazine pumps linkage (Page 15-401).
Check magazine will accept mines.

Step 11. Press and hold left [right] magazine servo actuator manual override button (Page 15-307 [Page 15-351]).
Servo actuator lever arm move?
If yes: Go to STEP 12.
If no: Go to STEP 20.

STEP 12. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to Test Point TP4 [TP8].
Start engine (TM 9-1095-205-10).
MODE SELECT switch to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press left [right] magazine servo actuator manual override button (Page 15-307 [Page 15-351]).
More than 580 psi (3996.2 kPa)?
If yes: Go to Step 13.
If no: Go to STEP 22.

Step 13. Observe motor gearbox coupling.
Coupling turning?
If yes: Go to Step 14.
If no: Replace left [right] magazine motor (Page 6-47 [Page 7-31]).
Check magazine will accept mines.

2-6.10 MAGAZINE WILL NOT ACCEPT MINES — Continued

Step 14. Stop engine (TM 9-1095-205-20).

NOTE

Do not unlock magazine drive sprocket locking cam. Magazine drive sprocket must remain engaged for next action.

Turn magazine reel by hand. Use manual crank.
Reel turn?
If yes: Go to STEP 15.
If no: Go to STEP 23.

STEP 15. Remove left [right] magazine main drive sprocket assembly from dispenser (Page 6-103 [Page 7-91]).
Inspect locking lever cam mechanism for damage.
Cam mechanism damaged?
If yes: Replace left [right] main drive sprocket drive assembly (Page 6-7 [Page 7-91]). Check magazine will accept mines.
If no: Replace left [right] magazine gearbox (Page 6-47 [Page 7-31]). Check magazine will accept mines.

Step 16. Release left [right] infeed proximity sensor lever.
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 17.
If no: Go to STEP 24.

STEP 17. Open outfeed chute cover (TM 9-1095-205-10).
Helper press left [right] output proximity sensor arm (Page 3-15).
More than 1 V dc?
If yes: Go to STEP 18.
If no: Go to STEP 25.

STEP 18. Disconnect P27 [P28] from J27 [J28].
Multimeter (+) probe on P27 [P28], Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] output proximity sensor (Page 3-15). Check magazine will accept mines.
If no: Go to STEP 28.

STEP 19. Close BACP (Page 11-49).
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 30.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3). Check magazine will accept mines.
If no: Replace Connector Assembly J4 (Page 16-139). Check magazine will accept mines.

STEP 20. Connect HSTRU pressure gage to Test Point TP1 [TP12].
Start engine (TM 9-1095-205-10).
More than 180 psi (1240.2 kPa)?
If yes: Go to Step 21.
If no: Go to STEP 30.

Step 21. Clean or replace left [right] magazine servo actuator filter (Page 15-409).
Check magazine will accept mines.
Magazine accept mines?
If yes: No further action required.
If no: Replace left [right] magazine servo actuator (Page 15-307 [Page 15-351]).
Check magazine will accept mines.

STEP 22. Stop engine (TM 9-1095-205-20).
Connect second HSTRU pressure gage to Test Point TP5 [TP9].
Start engine (TM 9-1095-205-10).
Difference between two gage readings 100 psi (689.0 kPa)?
If yes: Replace left [right] magazine pump (Page 15-307 [Page 15-351]).
Check magazine will accept mines.
If no: Go to Step 31.

Step 23. Unlock left [right] magazine drive sprocket locking cam (TM 9-1095-205-10).
Turn magazine reel by hand. Use manual crank.
Reel turn?
If yes: Replace left [right] magazine gearbox (Page 6-47 [Page 7-31]).
Check magazine will accept mines.
If no: Replace left [right] magazine reel assembly bearings (Page 6-83 [Page 7-71]).
Check magazine will accept mines.

STEP 24. Helper disconnect P27 [P28].
More than 9 V dc?
If yes: Replace left [right] output proximity sensor (Page 3-15).
Check magazine will accept mines.
If no: Go to STEP 33.

STEP 25. Release left [right] output proximity sensor arm.
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 26.
If no: Go to STEP 34.

Step 26. Helper press left [right] infeed proximity sensor (Page 6-37 [Page 7-21]).
More than 1 V dc?
If yes: Go to STEP 27.
If no: Go to Step 35.

2-6.10 MAGAZINE WILL NOT ACCEPT MINES — Continued

STEP 27. Remove left [right] infeed conveyor assembly from launcher (Page 6-21 [Page 7-7]).
Disconnect P21 [P22] from J21 [J22].
Install left [right] infeed conveyor assembly on launcher (Page 6-21 [Page 7-7]).
Multimeter (+) probe on P21 [P22], Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] infeed proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will accept mines.
If no: Go to STEP 38.

STEP 28. Connect P27 [P28] to J27 [J28].
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 29.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will accept mines.

STEP 29. Disconnect P15 [P18] from J15 [J18].
MASTER POWER switch on MCP off.
Multimeter (+) probe on Terminal Board 3TB, Terminal 65 [Terminal 64].
Multimeter (−) probe on J15 [J18], Pin Y [Pin j] (FO-1).
Less than 10 ohms?
If yes: Refer to higher level maintenance.
If no: Replace J15 [J18] (Page 6-7).

STEP 30. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU pressure gage from Test Point TP1 [TP12].
Connect HSTRU pressure gage to Test Point TP3 [TP10].
Start engine (TM 9-1095-205-10).
Greater than 5 in. (12.7 cm) Hg?
If yes: Clean or replace all hydraulic filters.
Check magazine will accept mines.
If no: Replace left [right] magazine pump (Page 15-307 [Page 15-351]).
Check magazine will accept mines.

Step 31. MAG BYP LT [RT]/TAB LT [RT] Lamp L61 [Lamp L62] on BACP lit?
If yes: Go to Step 32.
If no: Go to Step 40.

Step 32. Listen to left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Valve noisy?
If yes: Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Check magazine will accept mines.
If no: Go to STEP 41.

STEP 33. MASTER POWER switch on MCP off.
Connect P27 [P28] to J27 [J28].
Remove cover from Junction Box JB3 (Page 6-7).
Disconnect Wire Harness JB3 Lead 65 [Lead 64] from Terminal Board 3TB, Terminal 65 [Terminal 64] (Page 6-7).
Multimeter (+) probe on Wire Bundle JB3 Lead 65 [Lead 64].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will accept mines.
If no: Go to Step 42.

STEP 34. Remove left [right] infeed conveyor assembly from launcher (Page 6-21 [Page 7-7].
Disconnect P21 [P22] from J21 [J22].
Install left [right] infeed conveyor assembly on launcher (Page 6-21 [Page 7-7].
More than 9 V dc?
If yes: Replace left [right] infeed proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will accept mines.
If no: Go to STEP 44.

Step 35. Move left [right] magazine reel until two reel tabs are equal distance from left [right] tab proximity sensor and no tab is in front of sensor (Page 6-37 [Page 7-21]). Use manual crank.
Multimeter (+) probe on Terminal Board 1TB, Part 3 [Part 4], Terminal 60 [Terminal 63].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 36.
If no: Go to STEP 45.

Step 36. Move left [right] magazine reel tab until tab is in front of left [right] tab proximity sensor (Page 6-37 [Page 7-21]). Use manual crank.
More than 1 V dc?
If yes: Go to STEP 37.
If no: Go to Step 46.

STEP 37. Disconnect P25 [P26] from J25 [J26].
Multimeter (+) probe on P25 [P26], Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] tab proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will accept mines.
If no: Go to STEP 49.

STEP 38. Remove left [right] infeed conveyor assembly from launcher (Page 6-21 [Page 7-7].
Connect P21 [P22] to J21 [J22].
Install left [right] infeed conveyor assembly on launcher (Page 6-21 [Page 7-7].
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 39.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will dispense mines.

2-6.10 MAGAZINE WILL NOT ACCEPT MINES — Continued

STEP 39. Disconnect P15 [P18] from J15 [J18].
MASTER POWER switch on MCP off.
Multimeter (+) probe on Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (−) probe on J15 [J18], Socket C [Socket S].
Less than 10 ohms?
If yes: Refer to higher level maintenance.
If no: Replace J15 [J18] wire harness (Page 6-7).
Check magazine will accept mines.

Step 40. LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] on BACP lit?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will accept mines.
If no: Go to Step 51.

STEP 41. Disconnect P43 [P44] from J43 [J44].
Disconnect P43A [P44A] from J43A [J44A].
Multimeter (+) probe on P43 [P44], Contact B.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Check magazine will accept mines.
If no: Go to Step 59.

Step 42. Multimeter (+) probe on Terminal Board 4TB, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 43.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will accept mines.

STEP 43. Helper disconnect P15 [P18] from J15 [J18].
Less than 10 ohms?
If yes: Replace J15 [J18] wire harness (Page 6-7).
Check magazine will accept mines.
If no: Refer to higher level maintenance.

STEP 44. MASTER POWER switch on MCP off.
Remove left [right] infeed conveyor assembly from launcher (Page 6-21 [Page 7-7].
Connect P21 [P22] to J21 [J22].
Install left [right] infeed conveyor on launcher (Page 6-21 [Page 7-7]).
Remove cover from Junction Box JB3 (Page 6-7).
Disconnect Wire Bundle Assembly JB3 Lead 61 [Lead 58] from Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (+) probe on Lead 61 [Lead 58].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will accept mines.
If no: Go to Step 52.

STEP 45. Disconnect P25 [P26] from J25 [J26].
More than 9 V dc?
If yes: Replace left [right] tab proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will accept mines.
If no: Go to STEP 54.

Step 46. Perform B.I.T.E./ALARM PANEL CHECKOUT PROCEDURE (BACPCP), Item 11 [Item 12], LEFT [RIGHT] LOAD Circuits (TM 9-1095-205-20).
Load circuits pass checkout?
If yes: Go to Step 47.
If no: Go to Step 55.

Step 47. MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press LOAD ADVANCE UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [Switch S29] on BACP.
LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] on BACP lit?
If yes: Go to Step 48.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will accept mines.

Step 48. Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 70 [Terminal 72].
More than 1 V dc?
If yes: Replace Left [Right] Magazine Servo Actuator Cable Assembly P32 [P31] (Page 16-3).
Check magazine will accept mines.
If no: Go to STEP 56.

STEP 49. Connect P25 [P26] to J25 [J26].
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 60 [Terminal 63].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 50.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will accept mines.

STEP 50. MASTER POWER switch on MCP off.
Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on Terminal Board 3TB, Terminal 60 [Terminal 63].
Multimeter (−) probe on J15 [J18], Socket J [Socket K].
Less than 10 ohms?
If yes: Refer to higher level maintenance.
If no: Replace J15 [J18] Wire Harness (Page 6-7).
Check magazine will accept mines.

Step 51. D07 [D010] Lamp L44 [Lamp L47] on BACP lit?
If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will accept mines.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will accept mines.

2-6.10 MAGAZINE WILL NOT ACCEPT MINES — Continued

Step 52. Multimeter (+) probe on Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 53.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will accept mines.

STEP 53. Disconnect P15 [P18] from J15 [J18].
Less than 10 ohms?
If yes: Replace J15 [J18] wire harness (Page 6-7).
Check magazine will accept mines.
If no: Refer to higher level maintenance.

STEP 54. MASTER POWER switch on MCP off.
Connect P25 [P26] to J25 [J26].
Remove cover from Junction box JB3 (Page 6-7).
Disconnect Wire Bundle Assembly JB3 Lead 60 [Lead 63] from Terminal Board 3TB, Terminal 60 [Terminal 63] (Page 16-3).
Multimeter (+) probe on Lead 60 [Lead 63].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will accept mines.
If no: Go to Step 57.

Step 55. D07 [D010] Lamp L44 [Lamp L47] on BACP lit?
If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check launcher will accept mines.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher will accept mines.

STEP 56. MASTER POWER switch on MCP off.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin N3 [Pin G3].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA11 [CCA12] (Page 11-265).
Check magazine will accept mines.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will accept mines.

Step 57. Multimeter (+) probe on Terminal Board 3TB, Terminal 60 [Terminal 63].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 58.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will accept mines.

STEP 58. Disconnect P15 [P18] from J15 [J18].
Less than 10 ohms?
If yes: Replace J15 [J18] wire harness (Page 6-7).
Check magazine will accept mines.
If no: Refer to higher level maintenance.

Step 59. Multimeter (+) probe on P43A [P44A], Contact B.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Check magazine will accept mines.
If no: Replace J43 [J44] cable assembly (Page 16-3).
Check magazine will accept mines.

END OF TASK

2-6.11 MAGAZINE WILL NOT ADVANCE MINES TO OUTFEED CHUTE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
LOAD ADVANCE/UNLOAD SWITCH ASSEMBLY (Page 16-153)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Open left [right] magazine access doors (TM 9-1095-205-10).
Move left [right] magazine reel so infeed tabs are equal distance from left [right] input proximity sensor and no tab is in front of sensor.
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
RUN/TEST Switch S1 on BACP to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press LOAD ADVANCE/UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [S29] on BACP.
LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Switch L37 [L81] on BACP come on?
If yes: Go to STEP 2.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will advance mines to outfeed chute.

STEP 2. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 50 [Terminal 49].
Multimeter (−) probe on Terminal Board 1TB, Part 1, Terminal 17.
Helper press left [right] magazine LOAD ADVANCE/UNLOAD switch.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will advance mines to outfeed chute.
If no: Go to STEP 3.

STEP 3. Close BACP (Page 11-49).
Remove switchplate from left [right] pushbutton control station assembly (Page 16-153).
Multimeter (+) probe on Lead 50 [Lead 49].
Multimeter (−) probe on Lead 17.
Helper press left [right] magazine LOAD ADVANCE/UNLOAD switch.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly 1PB [2PB] (Page 16-3).
Check magazine will advance mines to outfeed chute.
If no: Replace left [right] LOAD ADVANCE/UNLOAD switch assembly (Page 16-153).
Check magazine will advance mines to outfeed chute.

END OF TASK

2-6.12 MAGAZINE WILL NOT RETURN MINES TO INFEED CHUTE

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
Pressure gage
Multimeter 6625-00-999-6282

Tools:

Metal plug (2) 4730-01-070-9214

Personnel Required:

Electrical repairer
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
LEFT GEARBOX AND MOTOR ASSEMBLY (Page 6-47)

References — Continued:

LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT MAGAZINE HYDRAULIC INSTALLATION (Page 9-115)
LEFT MAGAZINE REEL ASSEMBLY (Page 6-83)
LEFT MAIN DRIVE SPROCKET ASSEMBLY (Page 6-103)
LEFT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-307)
RIGHT GEARBOX AND MOTOR ASSEMBLY (Page 7-31)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MAGAZINE HYDRAULIC INSTALLATION (Page 9-167)
RIGHT MAGAZINE REEL ASSEMBLY (Page 7-71)
RIGHT MAIN DRIVE SPROCKET ASSEMBLY (Page 7-91)
RIGHT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-351)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Start engine (TM 9-1095-205-10.)
Open engine hinged [fixed] panel (TM 9-1095-205-10 [TM 9-1095-205-20]).
Helper observe left [right] servo actuator arm (Page 15-307 [Page 15-351]).
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Servo actuator arm move?
If yes: Go to STEP 2.
If no: Go to STEP 13.

STEP 2. Open BITE panel door (TM 9-1095-205-10).
Remove cover from B.I.T.E./ALARM CONTROL PANEL (TM 9-1095-205-20).
BUFFER B CCA2 MAG BYP LT[RT]/TAB LT[RT], LAMP L61 [Lamp L62] on BACP lit?
If yes: Go to STEP 3.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check magazine will return mines to infeed chute.

STEP 3. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to Test Point TP1 [TP12].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 180 psi (1240.2 kPa)?
If yes: Go to STEP 4.
If no: Replace left [right] magazine pump (Page 15-307 [Page 15-351]).
Check magazine will return mines to infeed chute.

STEP 4. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU pressure gage from Test Point TP1 [TP12].
Connect HSTRU pressure gage to Test Point TP2 [TP11].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 15 psi (123.35 kPa)?
If yes: Replace left [right] magazine pump (Page 15-307 [Page 15-351]).
Check magazine will return mines to infeed chute.
If no: Go to STEP 5.

STEP 5. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU pressure gage from Test Point TP2 [TP11].
Connect HSTRU pressure gage to Test Point TP6 [TP7].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 15 psi (123.35 kPa)?
If yes: Replace left [right] magazine motor (Page 6-47 [Page 7-31]).
Check magazine will return mines to infeed chute.
If no: Go to STEP 6.

STEP 6. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU pressure gage from Test Point TP6 [TP7].
Connect HSTRU pressure gage to Test Point TP5 [TP9].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 2300 psi (15,847.0 kPa)?
If yes: Go to Step 7.
If no: Go to STEP 11.

2-6.12 MAGAZINE WILL NOT RETURN MINES TO INFEED CHUTE — Continued

Step 7. Left [right] motor shaft turning?
If yes: Replace left [right] magazine gearbox (Page 6-47 [Page 7-31]).
Check magazine will return mines to infeed chute.
If no: Go to STEP 8.

STEP 8. Stop engine (TM 9-1095-205-20).
Open left [right] magazine access doors (TM 9-1095-205-10).
Unlock left [right] magazine drive sprocket locking cam (TM 9-1095-205-10).
Rotate left [right] magazine reel. Use manual crank.
Reel rotate?
If yes: Go to STEP 38.
If no: Go to Step 9.

Step 9. Inspect left [right] magazine for obstructions.
Obstructions?
If yes: Remove obstruction.
Check magazine will return mines to infeed chute.
If no: Go to STEP 10.

STEP 10. Remove left [right] main drive sprocket shaft (Page 6-103 [Page 7-91]).
Inspect left [right] main drive sprocket locking cam (Page 6-103 [Page 7-91]).
Locking cam lock and unlock drive sprocket halves?
If yes: Replace left [right] magazine reel bearings (Page 6-83 [Page 7-71]).
Check magazine will return mines to infeed chute.
If no: Replace left [right] magazine main drive sprocket (Page 6-103 [Page 7-91]).
Check magazine will return mines to infeed chute.

STEP 11. Stop engine (TM 9-1095-205-20).
Disconnect two feed lines from left [right] magazine motor (Page 9-115 [Page 9-167]).
Plug two feed lines. Use metal plug MS 51518-B8.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 2300 psi (15,847.0 kPa)?
If yes: Replace left [right] magazine motor (Page 6-47 [Page 7-31]).
Check magazine will return mines to infeed chute.
If no: Go to Step 12.

Step 12. Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
More than 2300 psi (15,847.0 kPa)?
If yes: Remove HSTRU pressure gage from Test Point TP5 [TP9].
Connect two feed lines to left [right] magazine motor [Page 9-115 [Page 9-167]).
Check magazine will return mines to infeed chute.
If no: Replace left [right] magazine pump (Page 15-307 [Page 15-351]).
Check magazine will return mines to infeed chute.

STEP 13. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA11 and CCA12 (Page 11-265).
Remove Circuit Card Assembly CCA11 from card rack assembly, Slot 11.
Remove Circuit Card Assembly CCA12 from card rack assembly, Slot 12.
Install Circuit Card Assembly CCA11 in card rack assembly, Slot 12.
Install Circuit Card Assembly CCA12 in card rack assembly, Slot 11.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Magazine reel turn?
If yes: Replace Circuit Card Assembly CCA11 [CCA12], which is in card rack assembly, Slot 12 [Slot 11] (Page 11-265).
Check magazine will return mines to infeed chute.
If no: Go to STEP 14.

STEP 14. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Magazine reel turn?
If yes: Replace Circuit Card Assembly CCA9 [CCA10], which is in card rack assembly, Slot 10 [Slot 9] (Page 11-265).
Check magazine will return mines to infeed chute.
If no: Go to STEP 15.

STEP 15. Disconnect P32 [P31] from J32 [J31].
Multimeter (+) probe on P32 [P31], Socket B.
Multimeter (−) probe on P32 [P31], Socket A.
More than 3 V dc?
If yes: Replace left [right] magazine servo actuator (Page 15-307 [Page 15-351]).
Check magazine will return mines to infeed chute.
If no: Go to STEP 16.

STEP 16. Connect P32 [P31] to J32 [J31].
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 70 [Terminal 72].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
More than 3 V dc?
If yes: Replace left [right] magazine servo actuator Cable Assembly P32 [P31] (Page 16-3).
Check magazine will return mines to infeed chute.
If no: Go to STEP 17.

2-6.12 MAGAZINE WILL NOT RETURN MINES TO INFEED CHUTE — Continued

STEP 17. Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin N9 [Pin E9].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 70 [Terminal 72].
Less than 10 ohms?
If yes: Go to STEP 18.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.

STEP 18. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 18 [Item 19], LEFT [RIGHT] UNLOAD Circuits (TM 9-1095-205-20).
Pass checkout?
If yes: Go to STEP 19.
If no: Go to Step 23.

STEP 19. Disconnect P21 [P22] from J21 [J22].
Multimeter (+) probe on P21 [P22], Socket F.
Multimeter (−) probe on bare metal ground.
MASTER POWER switch on MCP ON.
More than 9 V dc?
If yes: Replace left [right] input proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will return mines to infeed chute.
If no: Go to STEP 20.

STEP 20. Connect P21 [P22] to J21 [J22].
Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on J15 [J18], Socket c [Socket S].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 21.

STEP 21. Connect P15 [P18] to J15 [J18].
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J15 [J18] (Page 6-7).
Check magazine will return mines to infeed chute.
If no: Go to STEP 22.

STEP 22. Install cover on Junction Box JB3 (Page 6-7).
Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle JB3 (Page 16-3).
Check magazine will return mines to infeed chute.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.

Step 23. DO2 Lamp L39 on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to Step 24.
If no: Go to Step 35.

Step 24. DO8 [DO11] Lamp L45 [L48] on BACP lit?
If yes: Go to Step 25.
If no: Go to Step 32.

Step 25. DO1 Lamp L38 on BACP lit?
If yes: Go to Step 26.
If no: Go to Step 29.

Step 26. OPERATOR CONTROL PANEL TEST DISPENSE Lamp L1 on BACP lit?
If yes: Go to STEP 27.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will return mines to infeed chute.

STEP 27. Open BACP (Page 11-49).
Disconnect P1 from J1.
Disconnect P1 Lead 29 from Terminal Board 1TB, Part 1, Terminal 29 (Page 11-49).
Multimeter (+) probe on P1, Pin 010.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.
If no: Go to STEP 28.

STEP 28. Connect P1 Lead 29 to Terminal Board 1TB, Part 1, Terminal 29 (Page 11-49).
Remove cover from Junction Box JB4 (Page 16-139).
Disconnect two Leads 29 from Terminal Board 4TB, Terminals 29 (Page 16-139).
Multimeter (+) probe on Wire Bundle Assembly JB4, Lead 29.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will return mines to infeed chute.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will return mines to infeed chute.

Step 29. MAGAZINE LEFT/RIGHT/LOAD Lamp L24 [Lamp L26] on BACP lit?
If yes: Go to STEP 30.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will return mines to infeed chute.

STEP 30. Open BACP (Page 11-49).
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin T4 [Pin S1].
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.
If no: Go to STEP 31.

2-6.12 MAGAZINE WILL NOT RETURN MINES TO INFEED CHUTE — Continued

STEP 31. Remove cover from Junction Box JB4 (Page 16-139).
Disconnect Wire Bundle Assembly JB4 Lead 34 [Lead 37] from Terminal Board 4TB, Terminal 34 [Terminal 37] (Page 16-139).
Multimeter (+) probe on Lead 34 [Lead 37].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will return mines to infeed chute.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will return mines to infeed chute.

Step 32. MAGAZINE LEFT [RIGHT] UNLOAD Lamp L25 [Lamp 27] on BACP lit?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will return mines to infeed chute.
If no: Go to STEP 33.

STEP 33. MASTER POWER switch on MCP off.
ENGINE START/FUEL ON/OFF switch on OCB to FUEL ON.
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 35 [Terminal 38].
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Go to STEP 34.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will return mines to infeed chute.

STEP 34. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 35 [Terminal 38].
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will return mines to infeed chute.

Step 35. MAGAZINE LEFT [RIGHT] UNLOAD Lamp L25 [Lamp L27] on BACP lit?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will return mines to infeed chute.
If no: Go to Step 36.

Step 36. MASTER POWER switch on MCP off.
ENGINE START/FUEL ON/OFF switch on OCB to FUEL ON.
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 30.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 37.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will return mines to infeed chute.

STEP 37. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 30.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will return mines to infeed chute.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will return mines to infeed chute.

STEP 38. Remove left [right] magazine gearbox from dispenser (Page 6-47 [Page 7-31]).
Rotate gearbox input shaft until output shaft rotates one revolution (Page 6-47 [Page 7-31]).
Output shaft turn?
If yes: Replace left [right] magazine motor (Page 6-47 [Page 7-31]).
Check magazine will return mines to infeed chute.
If no: Replace left [right] magazine gearbox (Page 6-47 [Page 7-31]).
Check magazine will return mines to infeed chute.

END OF TASK

2-6.13 MAGAZINE WILL NOT UNLOAD MINES TO INFEED CHUTE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
LOAD ADVANCE/UNLOAD SWITCH ASSEMBLY (Page 16-153)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CC10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Magazine unload mines into infeed chute?
If yes: Replace Circuit Card Assembly CCA9 [10] (Page 11-265).
Check magazine will unload mines to infeed chute.
If no: Go to Step 2.

Step 2. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 50.
Multimeter (−) probe on bare metal ground.
Helper press and hold left [right] LOAD ADVANCE/UNLOAD switch (1PB [2PB]).
More than 9 V dc?
If yes: Replace Cable Assembly P1 (Page 11-67).
Check magazine will unload mines to infeed chute.
If no: Go to STEP 3.

STEP 3. MASTER POWER switch on MAIN CONTROL PANEL off.

NOTE

Do not remove wires from switch plate terminals.

Remove dust cap, pushbutton plate, and switch plate from left [right] LOAD ADVANCE/UNLOAD switch assembly (1PB [2PB]) (Page 16-153).
Multimeter (+) probe on 1PB [2PB] Wire No. 50 [49].
Multimeter (−) probe on 1PB [2PB] Wire No. 17 [17].
Helper press and hold left [right] LOAD ADVANCE/UNLOAD switch (1PB [2PB]).
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly 1PB [2PB] (Page 16-3).
Check magazine will unload mines to infeed chute.
If no: Replace left [right] LOAD ADVANCE/UNLOAD switch (1PB [2PB]) (Page 16-153).
Check magazine will unload mines to infeed chute.

END OF TASK

2-6.14 MAGAZINE WILL NOT STOP WHEN FULL OR WHEN ADVANCING MINES: MINES FALL FROM OUTFEED CHUTE ONTO CHASSIS DECK

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)

References — Continued:
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Open left [right] magazine access doors (TM 9-1095-205-10).
Move left [right] magazine reel so infeed tabs are equal distance from left [right] tab proximity sensor and no tab is in front of sensor. Use manual crank.
RUN/TEST Switch S1 on B.I.T.E./ALARM CONTROL PANEL (BACP) to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE switch on OCB to LOAD.
Remove cover from BACP (TM 9-1095-205-20).
Press and hold LOAD ADVANCE UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [S29] on BACP.
Press and release MAGAZINE FULL/DISP COUNT DWN, MAGAZINE LEFT [RIGHT] Switch S32 [S33] on BACP.
LEFT [RIGHT] MAG LOAD/UNLOAD CCA NO. 9 [No. 10] RUN Lamp L73 [L81] and FAST Lamp L76 [L84] go out?
If yes: Go to STEP 2.
If no: Replace Circuit Card Assembly CCA9 [No. 10] (Page 11-265).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.

STEP 2. Disconnect P27 [P28] from J27 [J28].
Multimeter (+) probe on P27 [P28], Socket F.
Multimeter (−) probe on P27 [P28], Socket D.
More than 9 V dc?
If yes: Go to Step 3.
If no: Go to STEP 5.

Step 3. Multimeter (+) probe on P27 [P28], Socket B.
Multimeter (−) probe on P27 [P28], Socket D.
More than 18 V dc?
If yes: Replace left [right] output proximity sensor (Page 3-15).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.
If no: Go to STEP 4.

STEP 4. Connect P27 [P28] to J27 [J28].
Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on J15 [J18], Socket g [Socket a].
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Refer to higher level maintenance.
If no: Replace Cable Assembly J15 [J18] (Page 16-3).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.

STEP 5. Connect P27 [P28] to J27 [J28].
Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on J15 [J18], Socket Y [Socket j].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 6.

STEP 6. Connect P15 [P18] to J15 [J18].
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Cable Assembly J15 [J18] (Page 16-3).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.
If no: Go to STEP 7.

2-6.14 MAGAZINE WILL NOT STOP WHEN FULL OR WHEN ADVANCING MINES: MINES FALL FROM OUTFEED CHUTE ONTO CHASSIS DECK — Continued

STEP 7. Install cover on Junction Box JB3 (Page 6-7).
Open BACP (Page 11-5).
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will stop when mine is present at output proximity sensor during loading or advancing loaded mines.

END OF TASK

2-6.15 MAGAZINE WILL NOT STOP WHEN RETURNING MINES TO INFEED CHUTE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)

References — Continued:
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT MAGAZINE SENSORS (FUNCTIONAL DESCRIPTION) (Page 6-4)
LOAD ADVANCE/UNLOAD SWITCH ASSEMBLY (Page 16-153)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MAGAZINE SENSORS (FUNCTIONAL DESCRIPTION) (Page 7-4)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Connect operator control box (OCB) to mine dispenser (TM 9-1095-205-10).
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
RUN/TEST Switch S1 on BACP to TEST.
Move left [right] magazine reel by hand until no metal tab is in front of left [right] tab proximity sensor (Page 6-4 [Page 7-4]).
MASTER POWER switch on Main Control Panel (MCP) ON.
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Press and hold LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [Switch S27] on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [Switch S31] on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 [RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81] on BACP goes out?
If yes: Go to Step 2.
If no: Go to STEP 11.

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2-6.15 MAGAZINE WILL NOT STOP WHEN RETURNING MINES TO INFEED CHUTE — Continued

Step 2. Release LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [Switch S27] on BACP.
Press and release LOAD ADVANCE/UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [Switch S29] on BACP.
Helper press and hold left [right] input proximity sensor lever (Page 6-4 [Page 7-4]).
Press and release COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [Switch S31] on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 [RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81] on BACP goes out?
If yes: Go to STEP 3.
If no: Go to STEP 7.

STEP 3. Press and release LOAD ADVANCE/UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [Switch S29] on BACP.
Open BACP (Page 11-67).
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 60 [Part 4, Terminal 63].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 4.
If no: Replace Cable Assembly P1 (Page 11-67).
Check magazine will stop when returning mines to infeed chute.

STEP 4. Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 60 [Terminal 63].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 5.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will stop when returning mines to infeed chute.

STEP 5. Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on J15 [J18], Socket J.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 6.
If no: Replace Connector Assembly J15 [J18] (Page 6-7).
Check magazine will stop when returning mines to infeed chute.

STEP 6. Connect P15 [P18] to J15 [J18].
Disconnect P25 [P26] from J25 [J26].
Multimeter (+) probe on P25 [P26], Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] tab proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will stop when returning mines to infeed chute.
If no: Refer to higher level maintenance.

STEP 7. Open BACP (Page 11-67).
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 8.
If no: Replace Cable Assembly P1 (Page 11-67).
Check magazine will stop when returning mines to infeed chute.

STEP 8. Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 9.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check magazine will stop when returning mines to infeed chute.

STEP 9. Disconnect P15 [P18] from J15 [J18].
Multimeter (+) probe on J15, Socket C [J18, Socket S].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 10.
If no: Replace Connector Assembly J15 [J18] (Page 6-7).
Check magazine will stop when returning mines to infeed chute.

STEP 10. Connect P15 [P18] to J15 [J18].
Disconnect P21 [P22] from J21 [J22].
Multimeter (+) probe on P21 [P22], Socket F.
Multimeter (−) probe on bare metal ground.
Less than 9 V dc?
If yes: Replace left [right] input proximity sensor (Page 6-37 [Page 7-21]).
Check magazine will stop when returning mines to infeed chute.
If no: Refer to higher level maintenance.

STEP 11. Release LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [Switch S27] on BACP.
MASTER POWER switch on MCP off.
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
MASTER POWER switch on MCP ON.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Press and hold LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [Switch S27] on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [Switch S31] on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 [RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81] on BACP goes out?
If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will stop when returning mines to infeed chute.
If no: Go to STEP 12.

2-6.15 MAGAZINE WILL NOT STOP WHEN RETURNING MINES TO INFEED CHUTE — Continued

STEP 12. MASTER POWER switch on MCP off.
Disconnect P1 from J1.
MASTER POWER switch on MCP ON.
Multimeter (+) probe on P1, Pin N7.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] LOAD ADVANCE/UNLOAD Switch assembly (1PB [2PB]) (Page 16-153).
Check magazine will stop when returning mines to infeed chute.
If no: Replace Rotary Switch 14SW (Page 11-195).
Check magazine will stop when returning mines to infeed chute.

END OF TASK

2-6.16 MAGAZINE WILL NOT STOP WHEN LOAD ADVANCE/UNLOAD PUSHBUTTON IS RELEASED

INITIAL SETUP

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

References — Continued:
LEFT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-307)
LOAD ADVANCE/UNLOAD SWITCH ASSEMBLY (Page 16-153)
RIGHT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-351)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Start engine (TM 9-1095-205-10).
Helper observe left [right] servo actuator arm for movement to neutral position.
MODE SELECT switch on operator control box (OCB) to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB OFF.
Magazine stop?
If yes: Go to STEP 2.
If no: Go to Step 3.

STEP 2. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
MASTER POWER SWITCH ON.
RUN/TEST Switch S1 on BACP to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.

2-6.16 MAGAZINE WILL NOT STOP WHEN LOAD ADVANCE/UNLOAD PUSHBUTTON IS RELEASED — Continued

STEP 2. — Continued

Press and hold LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [S27] for 5 seconds.
Press and hold COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [S31].
Press LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [S27].
Release COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [S31].
Press and release LOAD ADVANCE/UNLOAD MAGAZINE LEFT [RIGHT] Switch S28 [S29].
Watch LEFT MAG LOAD/UNLOAD CCA No. 9 RUN Lamp L73 [RIGHT MAG LOAD/UNLOAD CCA NO. 10 RUN Lamp L81] while you perform next two actions.
Press and hold LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S26 [S27].
Press COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [S31].
Lamp L73 [L81] go out?
If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.
If no: Replace left [right] LOAD ADVANCE/UNLOAD switch assembly 1PB [2PB] (Page 16-153).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.

Step 3. Left [right] servo actuator arm move to neutral position during STEP 1?
If yes: Replace left [right] magazine pump assembly (Page 15-307 [15-351]).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.
If no: Go to STEP 4.

STEP 4. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA11 and CCA12 (Page 11-265).
Remove Circuit Card Assembly CCA11 from card rack assembly, Slot 11.
Remove Circuit Card Assembly CCA12 from card rack assembly, Slot 12.
Install Circuit Card Assembly CCA11 in card rack assembly, Slot 12.
Install Circuit Card Assembly CCA12 in card rack assembly, Slot 11.
Start engine (TM 9-1095-205-10).
Have helper observe left [right] servo actuator arm for movement to neutral position.
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB OFF.
Left [right] servo actuator arm move to neutral position?
If yes: Replace Circuit Card Assembly CCA11 [CCA12] (Page 11-265).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.
If no: Go to STEP 5.

STEP 5. Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Start engine (TM 9-1095-205-10).
Helper observe left [right] servo actuator arm for movement to neutral position.
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB OFF.
Left [right] servo actuator arm move to neutral position?
If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.
If no: Replace left [right] servo actuator (Page 15-307 [15-351]).
Check magazine will stop when you release LOAD ADVANCE/UNLOAD pushbutton.

END OF TASK

2-6.17 MAGAZINE RUNS CONTINUOUSLY WHEN MODE SELECT SWITCH IS OFF

INITIAL SETUP

Personnel Required:
Electrical repairer

Reference:
CIRCUIT CARD ASSEMBLIES (Page 11-265)

OVERVIEW

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine does not run when MODE SELECT switch on operator control box is OFF.

END OF TASK

2-6.18 MAGAZINE WILL NOT DISPENSE MINES

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool
  outfit (HSTRU) 4940-00-036-5784:
    Pressure gage
    Hand pump
Multimeter 6625-00-999-6282

Tools:

24 V dc power source 6625-00-841-8917
Cap (2) 4730-00-625-2212

Personnel Required:

Electrical repairer
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)

References — Continued:

LEFT GEARBOX AND MOTOR ASSEMBLY (Page 6-47)
LEFT INFEED CONVEYOR AND LEFT END COVER ASSEMBLIES (Page 6-21)
LEFT MAGAZINE HYDRAULIC INSTALLATION (Page 9-115)
LEFT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-307)
LEFT MAGAZINE REEL ASSEMBLY (Page 6-83)
PIN ASSEMBLY PROXIMITY SENSOR (Page 4-199)
RIGHT GEARBOX AND MOTOR ASSEMBLY (Page 7-31)
RIGHT INFEED CONVEYOR AND RIGHT END COVER ASSEMBLIES (Page 7-7)
RIGHT MAGAZINE HYDRAULIC INSTALLATION (Page 9-167)
RIGHT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-351)
RIGHT MAGAZINE REEL ASSEMBLY (Page 7-71)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Step 1. One magazine dispense mines?
  If yes: Go to STEP 6.
  If no: Go to STEP 2.

STEP 2. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 13, DISPENSE Circuits (TM 9-1095-205-20).
  Circuits pass checkout?
  If yes: Go to STEP 3.
  If no: Go to Step 13.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

STEP 3. Remove mine gate pin from launcher (TM 9-1095-205-10).
Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 96.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 4.
If no: Go to STEP 19.

Step 4. Install mine gate pin on launcher (TM 9-1095-205-10).
More than 1 V dc?
If yes: Go to STEP 5.
If no: Go to STEP 20.

STEP 5. Disconnect P55 from J55.
Multimeter (+) probe on P55, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace pin assembly proximity sensor (Page 4-199).
Check magazine will dispense mines.
If no: Replace Launcher Hookup Cable J9 (Page 16-3).
Check magazine will dispense mines.

STEP 6. Unlock left [right] magazine drive sprocket locking cam (TM 9-1095-205-10).
Move left [right] magazine reel. Use manual crank.
Reel move?
If yes: Go to STEP 7.
If no: Go to Step 21.

STEP 7. Perform Dispenser Controls Readiness Test (TM 9-1095-205-10).
Pass Steps 31 thru 35 [Steps 37 thru 42] of Test?
If yes: Go to STEP 8.
If no: Go to Step 23.

STEP 8. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 9.
If no: Go to Step 25.

STEP 9. Set RUN/TEST switch on B.I.T.E./ALARM CONTROL PANEL (BACP) to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
Release LAUNCHER START switch.
LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to MAX.
Disconnect P32 [P31] from J32 [J31].
Multimeter (+) probe on P32 [P31], Socket A.
Multimeter (−) probe on P32 [P31], Socket B.
More than 3 V dc?
If yes: Go to STEP 10.
If no: Go to STEP 32.

STEP 10. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Helper observe left [right] magazine servo actuator arm for upward motion.
Press and hold LEFT [RIGHT] LOAD ADVANCE/UNLOAD switch (TM 9-1095-205-10).
Servo actuator arm move up?
If yes: Go to Step 11.
If no: Replace left [right] servo actuator (Page 15-307 [Page 15-351]).
Check magazine will dispense mines.

Step 11. Organizational mechanic have to remove mine from magazine manually?
If yes: Go to STEP 12.
If no: Go to STEP 33.

STEP 12. Connect HSTRU pressure gage to Test Point TP4 [TP8].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Helper observe left [right] magazine motor drive shaft for motion.
Press and hold LEFT [RIGHT] LOAD ADVANCE/UNLOAD switch (TM 9-1095-205-10).
Drive shaft turn?
If yes: Replace left [right] gearbox (Page 6-47 [Page 7-31]).
Check magazine will dispense mines.
If no: Go to Step 34.

Step 13. D01 Lamp L38 on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to Step 14.
If no: Go to STEP 36.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

Step 14. D04 Lamp L41 on BACP lit?
If yes: Go to Step 15.
If no: Go to STEP 37.

Step 15. D05 Lamp L42 on BACP lit?
If yes: Go to Step 16.
If no: Go to STEP 38.

Step 16. D06 Lamp L43 on BACP lit?
If yes: Go to Step 17.
If no: Go to STEP 39.

Step 17. D02 Lamp L39 on BACP lit?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check magazine will dispense mines.
If no: Go to STEP 18.

STEP 18. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF Switch on operator control box (OCB) to FUEL ON.
MODE SELECT switch on OCB to DISPENSE.
Disconnect P1 from J1.
Multimeter (+) probe on Pin 1, Pin S13.
Multimeter (−) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.
If no: Go to Step 40.

STEP 19. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Disconnect P1 from J1.
Multimeter (+) probe on Pin 1, Pin D12.
Multimeter (−) probe on Terminal Board 1TB, Part 6, Terminal 96.
Less than 10 ohms?
If yes: Replace pin assembly proximity sensor (Page 4-199).
Check magazine will dispense mines.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.

STEP 20. Raise left rear wheel so it rotates freely. Use leveling jack (TM 9-1095-205-10).
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 67.
Multimeter (−) probe on bare metal ground.

NOTE

> This step will determine if pulse generator signal is being transmitted to Terminal Board 1TB. For every 3/8 in. (1 cm) of tire rotation, the pulse generator emits approximately 13 pulses, each pulse 9 V dc. Turn wheel as slowly as possible for multimeter to receive these pulses.

Helper rotate left rear wheel approximately 1/16 inch (2 mm).
Multimeter move?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Replace Cable Assembly P11 (Page 16-3).
Check magazine will dispense mines.

Step 21. Check left [right] magazine reel for damage that would cause binding against drum.
Reel damaged or binding against drum?
If yes: Go to Step 22.
If no: Go to STEP 41.

Step 22. Reel weldment damaged?
If yes: Replace left [right] magazine reel assembly (Page 6-83 [Page 7-71]).
Check magazine will dispense mines.
If no: Replace left [right] magazine reel caps (Page 6-83 [Page 7-71]).
Check magazine will dispense mines.

Step 23. MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START.
Release LAUNCHER START switch.
LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to 0.001.
LEFT [RIGHT] MAGAZINE FIRE/OFF switch on OCB to FIRE.
D08 Lamp L45 [D011 Lamp L48] and D09 Lamp L46 [D012 Lamp L49] on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to STEP 24.
If no: Go to Step 42.

STEP 24. LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to 0.005.
MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 44.

Step 25. D08 Lamp L45 [D011 Lamp L48] on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to Step 26.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

Step 26. D09 Lamp L46 [D012 Lamp L49] on BACP lit?
If yes: Go to Step 27.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.

Step 27. D07 Lamp L44 [D010 Lamp L47] on BACP lit?
If yes: Go to Step 28.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.

Step 28. MAX DENSITY Lamp L78 [Lamp L80] on BACP lit?
If yes: Go to Step 29.
If no: Replace Circuit Card Assembly CCA5 [CCA6] (Page 11-265).
Check magazine will dispense mines.

Step 29. TAPS PWR ON Lamps L79 and L77 on BACP lit?
If yes: Go to Step 30.
If no: Replace Circuit Card Assembly CCA5 [CCA6] (Page 11-265).
Check magazine will dispense mines.

Step 30. FIRE Lamp L87 [L91] on BACP lit?
If yes: Go to Step 31.
If no: Replace Circuit Card Assembly CCA7 [CCA8] (Page 11-265).
Check magazine will dispense mines.

Step 31. RUN Lamp L73 [L81] on BACP lit?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check magazine will dispense mines.
If no: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine will dispense mines.

STEP 32. Connect P31 [P32] to J31 [J32].
Open BACP (Page 11-195).
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 70 [Terminal 72].
More than 3 V dc?
If yes: Replace Cable Assembly P32 [P31] (Page 16-3).
Check magazine will dispense mines.
If no: Go to STEP 45.

STEP 33.

NOTE

Do not remove fittings from valve.

Remove left [right] magazine electrical bypass valve from magazine (Page 9-115 [Page 9-167]).
Cap both unmarked valve ports.
Connect HSTRU hand pump to valve Port P1.
Apply 24 V dc to P43 [P44], Pin B and to P43A [P44A], Pin B. Use 24 V dc power source.

Ground P43 [P44], Pin A and P43A [P44A], Pin A.
Operate hand pump until gage reads 2000 psi (13,780.0 kPa) or until oil flows heavily from valve Port P2.
Oil flow heavily from valve Port P2?
If yes: Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]). Check magazine will dispense mines.
If no: Replace left [right] magazine pump assembly (Page 15-307 [Page 15-351]). Check magazine will dispense mines.

Step 34. Pressure more than 2200 psi (15,158.0 kPa)?
If yes: Go to STEP 35.
If no: Go to STEP 47.

STEP 35. Remove left [right] magazine gearbox from dispenser (Page 6-47 [Page 7-31]).
Turn left [right] magazine gearbox input shaft until output shaft rotates on revolution.
Input shaft bind?
If yes: Replace left [right] magazine gearbox (Page 6-47 [Page 7-31]). Check magazine will dispense mines.
If no: Replace left [right] magazine motor assembly (Page 6-47 [Page 7-31]). Check magazine will dispense mines.

STEP 36. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) to FUEL ON.
MODE SELECT switch on OCB to DISPENSE.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin 010.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265). Check magazine will dispense mines.
If no: Go to Step 48.

STEP 37. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) to FUEL ON.
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 4.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin T2.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265). Check magazine will dispense mines.
If no: Go to Step 49.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

STEP 38. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) to FUEL ON.
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 4.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin R4.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.
If no: Go to Step 50.

STEP 39. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
ENGINE START/FUEL ON/OFF switch on operator control box (OCB) to FUEL ON.
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 5.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin R2.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will dispense mines.
If no: Go to Step 51.

Step 40. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 30.
Multimeter (−) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 52.

STEP 41. Remove master link from left [right] infeed conveyor drive chain, and disengage chain (Page 6-21 [Page 7-7])
Move left [right] magazine reel by hand. Use manual crank.
Reel move?
If yes: Replace left [right] infeed conveyor (Page 6-21 [Page 7-7]).
Check magazine will dispense mines.
If no: Replace left [right] magazine reel bearings (Page 6-83 [Page 7-71]).
Check magazine will dispense mines.

Step 42. D09 Lamp L46 [D012 Lamp L49] on BACP lit?
If yes: Go to Step 43.
If no: Go to STEP 53.

Step 43. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 35 [Terminal 38].
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 54.

STEP 44. Close BACP (Page 11-49).
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 34 [Terminal 37]).
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Wire Bundle JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Cable Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 45. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin N3 [Pin G3].
Multimeter (−) probe on Terminal Board 1TB, Part 4, Terminal 69 [Terminal 71].
Less than 10 ohms?
If yes: Go to STEP 46.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.

STEP 46. Connect P1 to J1.
Remove Circuit Card Assembly CCA11 from card rack assembly, Slot 11 (Page 11-265).
Remove Circuit Card Assembly CCA12 from card rack assembly, Slot 12 (Page 11-265).
Install Circuit Card Assembly CCA11 in card rack assembly, Slot 12 (Page 11-265).
Install Circuit Card Assembly CCA12 in card rack assembly, Slot 11 (Page 11-265).
Perform BACPCP, Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
Density circuits pass checkout?
If yes: Replace Circuit Card Assembly CCA11 [CCA12], which is in card rack assembly, Slot 12 [Slot 11] (Page 11-265).
Check magazine will dispense mines.
If no: Go to STEP 55.

STEP 47. Remove left [right] magazine electrical bypass valve from magazine (Page 9-115 [Page 9-167]).
Cap both unmarked valve ports.
Connect HSTRU hand pump to valve Port 1.
Apply 24 V dc to P43 [P44], Pin B and to P43A [P44A], Pin B. Use 24 V dc power source.
Ground P43 [P44], Pin A and P43A [P44A], Pin A.
Operate hand pump until gage reads 2000 psi (13,780.0 kPa), or until oil flows heavily from valve Port P2.
Oil flow heavily from valve Port P2?
If yes: Replace left [right] magazine electrical bypass valve (Page 9-115 [Page 9-167]).
Check magazine will dispense mines.
If no: Go to STEP 56.

Step 48. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 29.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 57.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

Step 49. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 31.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 58.

Step 50. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 32.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 59.

STEP 51. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 33.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 60.

STEP 52. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 33.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 53. MASTER POWER switch on MCP off.
Open BACP (Page 11-195).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 36 [Terminal 39]).
Multimeter (–) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will dispense mines.
If no: Go to STEP 61.

STEP 54. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 35 [Terminal 38].
Multimeter (–) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 55. Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9 (Page 11-265).
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10 (Page 11-265).
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10 (Page 11-265).
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9 (Page 11-265).
Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace Circuit Card Assembly CCA9 [CCA10], which is in card rack assembly, Slot 10 [Slot 9] (Page 11-265).
Check magazine will dispense mines.
If no: Replace Circuit Card Assembly CCA7 [CCA8] (Page 11-265).
Check magazine will dispense mines.

STEP 56. Install left [right] magazine electrical bypass valve on magazine (Page 9-115 [Page 9-167]).
Connect pressure gage to Test Point TP6 [TP7].
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press and release LEFT [RIGHT] LOAD ADVANCE/UNLOAD switch (TM 9-1095-205-10).
Pressure more than 15 psi (102.35 kPa)?
If yes: Replace left [right] magazine motor assembly (Page 6-47 [Page 7-31]).
Check magazine will dispense mines.
If no: Replace left [right] magazine pump assembly (Page 15-307 [Page 15-351]).
Check magazine will dispense mines.

STEP 57. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 29.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 58. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 31.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 59. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 32.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

2-6.18 MAGAZINE WILL NOT DISPENSE MINES — Continued

STEP 60. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 33.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

STEP 61. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 36 [Terminal 39].
Multimeter (−) probe on bare metal ground.
Less than 25 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will dispense mines.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will dispense mines.

END OF TASK

2-6.19 MAGAZINE WILL NOT STOP DISPENSING MINES WHEN MAGAZINE FIRE/OFF SWITCH IS SET TO OFF

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Step 1. Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
All DENSITY LEFT MAGAZINE and DENSITY RIGHT MAGAZINE Lamps L12 through L23 on B.I.T.E./ALARM CONTROL PANEL (BACP) off?
If yes: Go to STEP 2.
If no: Go to STEP 13.

STEP 2. Remove cover from BACP (TM 9-1095-205-20).
D07 [D010] Lamp L44 [Lamp L47] on BACP lit?
If yes: Go to STEP 3.
If no: Go to Step 6.

STEP 3. Open BACP (Page 11-265).
MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Disconnect P1 from J1.
Multimeter (+) probe on Cable Assembly P1, Pin T4 [Pin S1].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 4.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

2-6.19 MAGAZINE WILL NOT STOP DISPENSING MINES WHEN MAGAZINE FIRE/OFF SWITCH IS SET TO OFF — Continued

STEP 4. Connect P1 to J1.
Remove P1 Lead 34 [Lead 47] from Terminal Board 1TB, Part 2, Terminal 34 [Terminal 47] (Page 11-49).
Multimeter (+) probe on Cable Assembly P1 Lead 34 [Lead 47].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Go to STEP 5.

STEP 5. Install P1 Lead 34 [Lead 47] on Terminal Board 1TB, Part 2, Terminal 34 [Terminal 47] (Page 11-49).
Close BACP (Page 11-265).
Remove cover from Junction Box JB4 (Page 16-139).
Remove Connector Assembly J4 Lead 34 [Lead 47] from Terminal Board 4TB, Terminal 34 [Terminal 47] (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 34 [Terminal 47].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

Step 6. D08 Lamp L45 on BACP lit?
If yes: Go to STEP 7.
If no: Go to STEP 10.

STEP 7. Open BACP (Page 11-265).
MASTER POWER switch on MCP off.
Disconnect P1 from J1.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 35 [Terminal 48].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 8.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 8. Connect P1 to J1.
Remove Cable Assembly P1 Lead 35 [Lead 48] from Terminal Board 1TB, Part 2, Terminal 35 [Terminal 48] (Page 11-49).
Multimeter (+) probe on Cable Assembly P1 Lead 35 [Lead 48].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Go to STEP 9.

STEP 9. Install Cable Assembly P1 Lead 35 [Lead 48] on Terminal Board 1TB, Part 2, Terminal 35 [Terminal 48] (Page 11-49).
Close BACP (Page 11-265).
Remove cover from Junction Box JB4 (Page 16-139).
Remove Connector Assembly J4 Lead 35 [Lead 48] from Terminal Board 4TB, Terminal 35 [Terminal 48].
Multimeter (+) probe on Terminal Board 4TB, Terminal 35 [Terminal 48].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 10. Open BACP (Page 11-265).
MASTER POWER switch on MCP off.
Disconnect P1 from J1.
Multimeter (+) probe on Cable Assembly P1, Pin 02 [Pin T6].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 11.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 11. Connect P1 to J1.
Remove Cable Assembly P1 Lead 36 [Lead 49] from Terminal Board 1TB, Part 2, Terminal 36 [Terminal 49] (Page 11-49).
Multimeter (+) probe on Cable Assembly P1 Lead 36 [Lead 49].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Go to STEP 12.

STEP 12. Install Cable Assembly P1 Lead 36 [Lead 49] on Terminal Board 1TB, Part 2, Terminal 36 [Terminal 49] (Page 11-49).
Close BACP (Page 11-49).
Remove cover from Junction Box JB4 (Page 16-139).
Remove Connector Assembly J4 Lead 36 [Lead 49] from Terminal Board 4TB, Terminal 36 [Terminal 49] (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 36 [Terminal 49].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

2-6.19 MAGAZINE WILL NOT STOP DISPENSING MINES WHEN MAGAZINE FIRE/OFF SWITCH IS SET TO OFF — Continued

STEP 13. Remove cover from BACP (TM 9-1095-205-20).
Following lamps on BACP lit:
D07 [D010] Lamp 44 [Lamp 47]?
D08 [D011] Lamp 45 [Lamp 48]?
D09 [D012] Lamp 46 [Lamp 49]?
If yes: Go to STEP 14.
If no: Replace Circuit Card Assembly CCA5 [CCA6] (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 14. MASTER POWER switch on MCP off.
Open BACP (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to STEP 15.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 15. Disconnect P1 from J1.
Less than 10 ohms?
If yes: Go to STEP 16.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 16. Connect P1 to J1.
Remove Cable Assembly P1 Leads 34 [37], 35 [38], and 36 [39] from Terminal Board 1TB, Part 2, Terminals 34 [37], 35 [38], and 36 [39] (Page 11-49).
Multimeter (+) probe on each open terminal in turn.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms for any terminal?
If yes: Go to STEP 17.
If no: Replace Cable Assembly P1 (Page 11-49).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

STEP 17. Install Cable Assembly P1 Leads 34 [37], 35 [38], and 36 [39] on Terminal Board 1TB, Part 2, Terminals 34 [37], 35 [38], and 36 [39] (Page 11-49).
Close BACP (Page 11-49).
Remove cover from Junction Box JB4 (Page 16-139).
Remove Connector Assembly J4 Leads 34 [37], 35 [38], and 36 [39] from Terminal Board 4TB, Terminals 34 [37], 35 [38], and 36 [39].
Multimeter (+) probe on each open terminal in turn.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms for any terminal?

If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine will stop dispensing mines witn magazine FIRE/OFF switch OFF.

If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine will stop dispensing mines with magazine FIRE/OFF switch OFF.

END OF TASK

2-6.20 MAGAZINE DISPENSES MINES SPORADICALLY

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-10
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)

References — Continued:
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)
TWIST CHUTE AND TWIN DROP CHUTE ASSEMBLIES (Page 3-3)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Remove twist chute assembly (Page 3-3).
Check twist chute assembly for damage that would restrict movement of mines.
Mine restricting damage?
If yes: Replace twist chute assembly (Page 3-3).
Check magazine does not dispense mines sporadically.
If no: Go to STEP 2.

STEP 2. Install twist chute assembly (Page 3-3).
Connect operator control box (OCB) to dispenser (TM 9-1095-205-10).
Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
MODE SELECT switch on OCB to DISPENSE.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin 0-10.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Circuit Card Assembly CCA5 (Page 11-265).
Check magazine does not dispense mines sporadically.
If no: Go to Step 3.

Step 3. Connect P1 to J1.
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 29.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine does not dispense mines sporadically.
If no: Go to Step 4.

Step 4. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 29.
Multimeter (−) probe on bare metal ground.
Less than 2 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine does not dispense mines sporadically.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine does not dispense mines sporadically.

END OF TASK

2-6.21 MAGAZINE DISPENSES MINES AT IMPROPER DENSITY

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

References:
TM 9-1095-205-10
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
ENCODER ASSEMBLY (Page 8-5)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Step 1. Perform dispenser controls readiness test (TM 9-1095-205-10).
Pass test?
If yes: Go to Step 2.
If no: Go to STEP 5.

Step 2. Magazines both dispense at improper density?
If yes: Replace encoder assembly pulse generator (Page 8-5).
Check magazine dispenses at proper density.
If no: Go to STEP 3.

STEP 3. RUN/TEST switch on B.I.T.E./ALARM CONTROL PANEL (BACP) to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
If LEFT [RIGHT] MAGAZINE STATUS MINE COUNT display shows less than 100, set MINE COUNT CORRECTION UP/DOWN Switch S6 on BACP to UP. Press and release MINE COUNT CORRECTION MAGAZINE LEFT [RIGHT] Switch S7 [S8] on BACP until mine count is 100.

Step 3. — Continued

MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
Hold LAUNCHER START switch on OCB to START until LAUNCHER READY Lamp on OCB comes on.
LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to 0.001.
LEFT [RIGHT] MAGAZINE FIRE/OFF switch on OCB to FIRE.
D08 Lamp L45 [D011 Lamp L48] and D09 Lamp L46 [D012 Lamp 49] come on?
If yes: Go to Step 4.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine dispenses at proper density.

Step 4. LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to 0.005.
D07 Lamp L44 [D010 Lamp L47] come on?
If yes: Replace Circuit Card Assembly CCA5 [CCA6] (Page 11-265).
Check magazine dispenses at proper density.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check magazine dispenses at proper density.

STEP 5. Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin T4 [Pin S1].
Multimeter (−) probe on bare metal ground.
ENGINE/FUEL ON/OFF switch on operator control box (OCB) from OFF to FUEL ON.
MODE SELECT on OCB to DISPENSE.
LEFT [RIGHT] MAGAZINE DENSITY switch on OCB to 0.005.
LEFT [RIGHT] MAGAZINE FIRE/OFF switch on OCB to FIRE.
Between 15 and 25 ohms?
If yes: Go to Step 6.
If no: Go to Step 11.

Step 6. Multimeter (+) probe on P1, Pin 02 [Pin T6].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Go to Step 7.
If no: Go to Step 9.

Step 7. LEFT/RIGHT/MAGAZINE DENSITY switch on OCB to 0.001.
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 35 [Terminal 38].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-67).
Check magazine dispenses at proper density.
If no: Go to STEP 8.

STEP 8. Connect P1 to J1.
Close electrical enclosure door (TM 9-1095-205-10).
Remove Junction Box JB4 cover (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 35 [Terminal 38].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine dispenses at proper density.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine dispenses at proper density.

2-6.21 MAGAZINE DISPENSES AT IMPROPER DENSITY — Continued

Step 9. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 36 [Terminal 39].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine dispenses at proper density.
If no: Go to STEP 10.

STEP 10. Connect P1 to J1.
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 36 [Terminal 39].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine dispenses at proper density.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine dispenses at proper density.

Step 11. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check magazine dispenses at proper density.
If no: Go to STEP 12.

STEP 12. Connect P1 to J1.
Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 34 [Terminal 37].
Multimeter (−) probe on bare metal ground.
Between 15 and 25 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check magazine dispenses at proper density.
If no: Replace Connector Assembly J4 (Page 16-139).
Check magazine dispenses at proper density.

END OF TASK

2-6.22 MAGAZINE HUNTS (WON'T STOP RAPID FORWARD/REVERSE MOVEMENT)

INITIAL SETUP

References:

TM 9-1095-205-10
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Stop engine (TM 9-1095-205-20).
Tag and mark Circuit Card Assemblies CCA11 and CCA12 (Page 11-265).
Remove Circuit Card Assembly CCA11 from card rack assembly, Slot 11.
Remove Circuit Card Assembly CCA12 from card rack assembly, Slot 12.
Install Circuit Card Assembly CCA11 in card rack assembly, Slot 12.
Install Circuit Card Assembly CCA12 in card rack assembly, Slot 11.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box to DISPENSE.
Magazine still hunt?

If yes: Replace Circuit Card Assembly CCA9 [CCA10] (Page 11-265).
Check magazine does not hunt.

If no: Replace Circuit Card Assembly CCA11 [CCA12] in card rack assembly, Slot 12 [Slot 11] (Page 11-265).
Check magazine does not hunt.

END OF TASK

2-6.23 LAUNCHER WILL NOT COME UP TO SPEED

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
- Pressure gage
- Hand pump

Multimeter 6625-00-999-6282
Digital tachometer 6680-00-242-9229

Tools:

Metal cap 4730-00-727-7485

Personnel Required:

Electrical repairer
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)

References — Continued:

CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
HYDRAULIC MOTOR AND CLUTCH DRIVE (Page 4-207)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LAUNCHER HYDRAULIC INSTALLATION (Page 9-3)
LAUNCHER PUMP LINKAGE ADJUSTMENT (Page 15-303)
LAUNCHER WHEEL BRAKE PROXIMITY SENSOR ASSEMBLY (Page 4-139)
SOLENOID VALVE ASSEMBLY (Page 4-91)
SWIVEL JOINT ASSEMBLY (Page 4-63)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Open launcher wheel access door (TM 9-1095-205-10).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
Hold LAUNCHER START switch on OCB to START.
Launcher wheel turn?
If yes: Go to Step 2.
If no: Go to Step 4.

Step 2. Release LAUNCHER START switch on OCB.
Launcher wheel still turn?
If yes: Go to STEP 3.
If no: Go to STEP 6.

STEP 3. Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 46.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check launcher will come up to speed.
If no: Go to STEP 8.

Step 4. Release LAUNCHER START switch on OCB.
LAUNCHER BRAKE SOL Lamp L36 on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to STEP 5.
If no: Go to STEP 9.

STEP 5. Stop engine (TM 9-1095-205-20).
Disconnect P56 from J56.
Multimeter (+) probe on P56, Socket B.
Multimeter (–) probe on bare metal ground.
Between 3800 and 4200 ohms?
If yes: Replace solenoid valve assembly (Page 4-91).
Check launcher will come up to speed.
If no: Go to STEP 16.

STEP 6. Install digital tachometer on launcher wheel.
Hold LAUNCHER START switch on OCB to START.
Launcher speed more than 840 rpm?
If yes: Go to STEP 7.
If no: Go to STEP 14.

STEP 7. Open BITE Panel Door (TM 9-1095-205-10).
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
LCHR UP TO SP Lamp L69 on BACP lit?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check launcher will come up to speed.
If no: Go to STEP 17.

STEP 8. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 46.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher will come up to speed.
If no: Replace Connector Assembly J4 (Page 16-139).
Check launcher will come up to speed.

STEP 9. Open engine hinged panel (TM 9-1095-205-10).
Check launcher pump linkage adjustment (Page 15-303).
Launcher pump linkage adjusted?
If yes: Go to Step 10.
If no: Adjust launcher pump linkage (Page 15-303).
Check launcher will come up to speed.

Step 10. Stop engine (TM 9-1095-205-20).
Helper listen to launcher run valve (Page 9-3).
ENGINE START/FUEL ON/OFF switch on OCB to START.
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START.
Launcher valve click?
If yes: Go to STEP 11.
If no: Go to STEP 23.

2-6.23 LAUNCHER WILL NOT COME UP TO SPEED — Continued

STEP 11. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to Test Point TP15.
Start engine (TM 9-1095-205-10).
More than 100 psi (689.0 kPa)?
If yes: Go to STEP 12.
If no: Go to STEP 26.

STEP 12. MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START.
Pressure more than 3200 psi (22,048.0 kPa)?
If yes: Go to Step 13.
If no: Go to STEP 27.

Step 13. Inspect launcher hydraulic installation tubes and hoses for damage that would restrict flow (Page 9-3).
Tube or hose damaged?
If yes: Replace damaged tube or hose (Page 9-3).
Check launcher will come up to speed.
If no: Replace launcher motor (Page 4-207).
Check launcher will come up to speed.

STEP 14. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to Test Point TP15.
Helper hold manual override button on hydraulic accumulator (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START.
More than 3200 psi (22,048.0 kPa)?
If yes: Go to Step 15.
If no: Go to STEP 28.

Step 15. Stop engine (TM 9-1095-205-20).
Inspect launcher hydraulic installation tubes and hoses for damage that would restrict flow (Page 9-3).
Tube or hose damaged?
If yes: Replace damaged tube or hose (Page 9-3).
Check launcher will come up to speed.
If no: Go to Step 29.

STEP 16. Open BACP (Page 11-49).
Disconnect three Leads 105 from Terminal Board 1TB, Part 6, Terminal 105 (Page 11-49).
Disconnect P9 from J9.
Multimeter (+) probe on J9, Socket B.
Multimeter (−) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher will come up to speed.
If no: Go to STEP 30.

STEP 17. Stop engine (TM 9-1095-205-20).
Remove launcher wheel and tire from dispenser (TM 9-1095-205-10).
Disconnect P38 from J38.
MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
Multimeter (+) probe on P38, Socket B.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 18.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher will come up to speed.

Step 18. Multimeter (+) probe on P38, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 19.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher will come up to speed.

Step 19. Multimeter (+) probe on P38, Socket D.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to Step 20.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher will come up to speed.

Step 20. Connect P38 to J38.
Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 88.
Multimeter (−) probe on Terminal Board 1TB, Part 3, Terminal 2.
More than 9 V dc?
If yes: Go to STEP 21.
If no: Replace launcher wheel brake proximity sensor (Page 4-139).
Check launcher will come up to speed.

STEP 21. Have helper position piece of metal in front of, but not touching, launcher wheel brake proximity sensor (Page 4-139).
Less than 1 V dc?
If yes: Go to Step 22.
If no: Replace launcher wheel brake proximity sensor (Page 4-139).
Check launcher will come up to speed.

Step 22. Check launcher wheel brake proximity sensor adjustment (Page 4-139).
Sensor adjusted?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check launcher will come up to speed.
If no: Adjust launcher wheel brake proximity sensor (Page 4-139).
Check launcher will come up to speed.

STEP 23. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 13, DISPENSE Circuits (TM 9-1095-205-20).
LAUNCHER READY Lamp L52 and LAUNCHER RUN Lamp L53 on BACP lit?
If yes: Go to STEP 24.
If no: Go to Step 32.

2-6.23 LAUNCHER WILL NOT COME UP TO SPEED — Continued

STEP 24. Disconnect P42 from J42.
Multimeter (+) probe on P42, Socket A.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 25.
If no: Replace Launcher Wheel Solenoid Valve Cable Assembly P42 (Page 16-3).
Check launcher will come up to speed.

Step 25. Multimeter (+) probe on P42, Socket B.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace launcher electrical valve assembly (Page 4-91).
Check launcher will come up to speed.
If no: Go to STEP 33.

STEP 26. Replace launcher pump (Page 15-275).
Connect HSTRU pressure gage to Test Point TP15.
Start engine (TM 9-1095-205-10).
More than 100 psi (689.0 kPa)?
If yes: Check launcher will come up to speed.
If no: Go to STEP 34.

STEP 27. Stop engine (TM 9-1095-205-20).
Disconnect pump-to-relief valve tube assembly from relief valve adapter (Page 9-3).
Cap adapter.
Disconnect relief valve-to-run valve tube assembly from relief valve adapter (Page 9-3).
Connect HSTRU hand pump to adapter.

NOTE

Do not cap adapter.

Disconnect relief valve-to-pump return tube assembly from relief valve adapter (Page 9-3).
Wait until all hydraulic oil has drained from relief valve.
Operate HSTRU hand pump until pressure is 3150 psi (21,703.5 kPa).
Hydraulic oil flow from open adapter?
If yes: Replace launcher hydraulic installation relief valve (Page 9-3).
Check launcher will come up to speed.
If no: Go to STEP 35.

STEP 28. Disconnect pump-to-relief valve tube assembly from relief valve adapter (Page 9-3).
Cap adapter.
Disconnect relief valve-to-run valve tube assembly from relief valve adapter (Page 9-3).
Connect HSTRU hand pump to adapter.

NOTE

Do not cap adapter.

Disconnect relief valve-to-pump return tube assembly from relief valve adapter (Page 9-3).
Wait until all hydraulic oil has drained from relief valve.
Operate HSTRU hand pump until pressure is 3150 psi (21,703.5 kPa).
Hydraulic oil flow from open adapter?
If yes: Replace launcher hydraulic installation relief valve (Page 9-3).
Check launcher will come up to speed.
If no: Go to STEP 36.

Step 29. Adjust launcher pump linkage (Page 15-303).
Pump linkage adjusted?
If yes: Check launcher will come up to speed.
If no: Replace launcher motor (Page 4-207).
Check launcher will come up to speed.

STEP 30. Disconnect J17A from P17A.
Multimeter (+) probe on J17A, Pin 29.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Go to STEP 31.
If no: Go to STEP 37.

STEP 31. Connect J17A to P17A.
Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin B.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check launcher will come up to speed.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher will come up to speed.

Step 32. D01 Lamp L38 and D02 Lamp L39 on BACP come on as required?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check launcher will come up to speed.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher will come up to speed.

STEP 33. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 75.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Launcher Wheel Solenoid Valve Cable Assembly P42 (Page 16-3).
Check launcher will come up to speed.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher will come up to speed.

2-6.23 LAUNCHER WILL NOT COME UP TO SPEED — Continued

STEP 34. Replace launcher motor (Page 4-207).
Connect HSTRU pressure gage to Test Point TP15.
Start engine (TM 9-1095-205-10).
More than 100 psi (689.0 kPa)?
If yes: Check launcher will come up to speed.
If no: Remove, disassemble, reassemble, and install swivel joint (Page 4-63).
Check launcher will come up to speed.

STEP 35. Disconnect HSTRU hand pump from relief valve adapter.
Connect relief valve-to-run valve tube assembly to relief valve adapter (Page 9-3).
Remove metal cap from adapter.
Connect pump-to-relief valve tube assembly to relief valve adapter (Page 9-3).
Disconnect pressure hose from swivel joint adapter (Page 4-63).
Cap swivel joint adapter.
Disconnect two hydraulic hoses from swivel joint elbows (Page 4-63).
Connect HSTRU hand pump to pressure elbow.
Wait until all hydraulic oil has drained from return elbow.
Operate hand pump until pressure is 3150 psi (21,703.5 kPa).
Hydraulic oil flow from return elbow?
If yes: Remove, disassemble, reassemble, and install swivel joint (Page 4-63).
Check launcher will come up to speed.
If no: Go to STEP 38.

STEP 36. Disconnect HSTRU hand pump from relief valve adapter.
Connect relief valve-to-run valve tube assembly to relief valve adapter (Page 9-3).
Remove metal cap from adapter.
Connect pump-to-relief valve tube assembly to relief valve adapter (Page 9-3).
Disconnect pressure hose from swivel joint adapter (Page 4-63).
Cap swivel joint adapter.
Disconnect two hydraulic hoses from swivel joint elbows (Page 4-63).
Connect HSTRU hand pump to pressure elbow.
Wait until all hydraulic oil has drained from return elbow.
Operate hand pump until pressure is 3150 psi (21,703.5 kPa).
Hydraulic oil flow from return elbow?
If yes: Remove, disassemble, reassemble, and install swivel joint (Page 4-63).
Check launcher will come up to speed.
If no: Go to STEP 39.

STEP 37. Connect J17A to P17A.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin C9.
Multimeter (−) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check launcher will come up to speed.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher will come up to speed.

STEP 38. Disconnect HSTRU hand pump from pressure elbow.
Connect two hydraulic hoses to swivel joint elbows (Page 4-63).
Remove cap from swivel joint adapter.
Connect pressure hose to swivel joint adapter (Page 4-63).
Replace launcher pump (Page 15-275).
Connect HSTRU pressure gage to Test Point TP15.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START.
More than 3200 psi (22,048.0 kPa)?
If yes: Check launcher will come up to speed.
If no: Replace launcher hydraulic motor (Page 4-207).
Check launcher will come up to speed.

STEP 39. Disconnect HSTRU hand pump from pressure elbow.
Connect two hydraulic hoses to swivel joint elbows (Page 4-63).
Remove cap from swivel joint adapter.
Connect pressure hose to swivel joint adapter (Page 4-63).
Replace launcher pump (Page 15-275).
Connect HSTRU pressure gage to Test Point TP15.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START.
More than 3200 psi (22,048.0 kPa)?
If yes: Check launcher will come up to speed.
If no: Replace launcher hydraulic motor (Page 4-207).
Check launcher will come up to speed.

END OF TASK

2-6.24 LAUNCHER STOPS INSTANTLY WHEN BRAKED IMMEDIATELY AFTER IT STARTS, BUT SLOWLY OR NOT AT ALL WHEN BRAKED SOMETIME LATER

INITIAL SETUP

Test Equipment:
Hydraulic systems test and repair tool
outfit (HSTRU) 4940-01-036-5784:
Hand pump

Tools:
Stop watch 6645-00-250-4680

References:
CHARGE LINE CHECK VALVE (Page 4-79)
HYDRAULIC ACCUMULATOR (Page 4-101)
SOLENOID VALVE ASSEMBLY (Page 4-91)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. Check hydraulic accumulator pressure (Page 4-101).
More than 1450 psi (9990.5 kPa)?
If yes: Go to STEP 2.
If no: Precharge accumulator (Page 4-101).
Check launcher stops correctly when braked.

STEP 2. Remove charge line check valve (Page 4-79).
Connect HSTRU hand pump to check valve output port.
Operate hand pump until pressure is 3300 psi (22,737 kPa).
Oil leak from valve input port less than 5 drops per minute?
If yes: Replace solenoid valve assembly (Page 4-91).
Check launcher stops correctly when braked.
If no: Replace charge line check valve (Page 4-79).
Check launcher stops correctly when braked.

END OF TASK

2-6.25 LAUNCHER WILL NOT STOP AT ANY TIME WHEN BRAKED

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
  Hand pump
Multimeter 6625-00-999-6282

Personnel Required:

Mechanic
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)

References — Continued:

CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CHARGE LINE CHECK VALVE (Page 4-79)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
DISC BRAKE ASSEMBLY (Page 4-159)
HYDRAULIC ACCUMULATOR (Page 4-101)
LAUNCHER WHEEL BRAKE ASSEMBLY (Page 4-147)
LEFT MINE INPUT PROXIMITY SENSOR (Page 4-189)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
RIGHT MINE INPUT PROBE GROUP (Page 4-217)
RIGHT MINE INPUT PROXIMITY SENSOR (Page 4-195)
SOLENOID VALVE ASSEMBLY (Page 4-91)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Step 1. Start engine. (TM 1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START.
Press override button on solenoid valve assembly (Page 4-91).
Launcher wheel stop?
If yes: Go to STEP 2.
If no: Go to STEP 17.

STEP 2. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure, Item 16 [Item 17], Left [Right] JAMMED MINE Circuits (TM 9-1095-205-20).
JAMMED MINE LAUNCHER BRAKE SOL Lamp L36 and WH POWER Lamp L37 come on if required?
If yes: Go to STEP 3.
If no: Go to Step 13.

2-6.25 LAUNCHER WILL NOT STOP AT ANY TIME WHEN BRAKED — Continued

STEP 3. Open B.I.T.E./ALARM CONTROL PANEL (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 101.
Multimeter (−) probe on bare metal ground.
Helper turn and release launcher left input sensor probe handle (TM 9-1095-205-10).
Less than 1 V dc?
If yes: Go to STEP 4.
If no: Go to STEP 10.

STEP 4. Open manual bypass valve (TM 9-1095-205-10).
Move launcher left.
Close manual bypass valve (TM 9-1095-205-10).
Open swivel joint access door (TM 9-1095-205-10).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 102.
Multimeter (−) probe on bare metal ground.
Helper turn and release launcher right input sensor probe handle (Page 4-217).
Less than 1 V dc?
If yes: Go to Step 5.
If no: Go to STEP 7.

Step 5. Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 103.
Multimeter (−) probe on bare metal ground.
Less than 1 V dc?
If yes: Go to Step 6.
If no: Replace left output proximity sensor (Page 3-15).
Check launcher stops when braked.

Step 6. Multimeter (+) probe on 1TB, Part 6, Terminal 104.
Multimeter (−) probe on bare metal ground.
Less than 1 V dc?
If yes: Replace solenoid valve assembly (Page 4-91).
Check launcher stops when braked.
If no: Replace right output proximity sensor (Page 3-15).
Check launcher stops when braked.

STEP 7. Disconnect P52 from J52.
Multimeter (+) probe on P52, Socket A.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 8.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 8. Multimeter (+) probe on P52, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 9.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 9. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Multimeter (+) probe on P52, Socket D.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace right mine input proximity sensor (Page 4-195).
Check launcher stops when braked.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

STEP 10. Remove left mine input proximity sensor access cover from launcher (Page 4-23).
Disconnect P51 from J51.
Multimeter (+) probe on P51, Pin B.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 11.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 11. Multimeter (+) probe on P51, Pin F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 12.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 12. MASTER POWER switch on MCP off.
Multimeter (+) probe on P51, Pin D.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace left mine input proximity sensor (Page 4-189).
Check launcher stops when braked.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 13. JAMMED MINE LAUNCHER BRAKE SOL Lamp L36 on B.I.T.E./ALARM CONTROL PANEL (BACP) lit?
If yes: Go to STEP 14.
If no: Go to Step 16.

STEP 14. Disconnect P56 from J56.
Multimeter (+) probe on P56, Socket C.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Go to Step 15.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

Step 15. Multimeter (+) probe on P56, Socket B.
Multimeter (−) probe on bare metal ground.
Between 3800 and 4200 ohms?
If yes: Replace solenoid valve assembly (Page 4-91).
Check launcher stops when braked.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher stops when braked.

2-6.25 LAUNCHER WILL NOT STOP AT ANY TIME WHEN BRAKED — Continued

Step 16. MASTER POWER switch on MCP off.
Perform continuity check between Cable Assembly P2 and Rotary Switch 14SW. (See following P2/14SW Continuity List).

P2/14SW CONTINUITY LIST

Multimeter (+) Probe on P2, Pin	Multimeter (−) Probe on 14SW, Terminal
H12	B2
B12	B3
L13	C1
K12	C2

Less than 10 ohms all readings?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher stops when braked.
If no: Replace P2, P80, and J17A Cable Assembly (Page 11-67).
Check launcher stops when braked.

STEP 17. Stop engine (TM 9-1095-205-20).
Remove launcher wheel and tire from dispenser (TM 9-1095-205-10).
Inspect launcher disc brake assembly for leaks. Disc brake assembly should be dry.
Disc brake leak?
If yes: Replace, disassemble, reassemble, and install disc brake assembly (Page 4-159).
Check launcher stops when braked.
If no: Go to Step 18.

Step 18. Inspect brake disc for grooves. Brake disc should not be grooved.
Disc grooved?
If yes: Replace brake disc (Page 4-147) and disc brake assembly pucks (Page 4-159).
Check launcher stops when braked.
If no: Go to Step 19.

Step 19. Bleed disc brakes (TM 9-1095-205-20).
Brakes require bleeding?
If yes: Check launcher stops when braked.
If no: Go to Step 20.

Step 20. Check accumulator precharge (Page 4-101).
Less than 1450 psi (9990.5 kPa)?
If yes: Precharge hydraulic accumulator (Page 4-101).
Check launcher stops when braked.
If no: Go to STEP 21.

STEP 21. Remove charge line check valve from hydraulic manifold (Page 4-79).
Connect HSTRU hand pump to check valve output port.
Operate hand pump until pressure is 3300 psi (22,737.0 kPa).
More than five drops hydraulic oil per minute from valve input port?
- If yes: Replace charge line check valve (Page 4-79).
  Check launcher stops when braked.
- If no: Replace solenoid valve assembly (Page 4-91).
  Check launcher stops when braked.

END OF TASK

2-6.26 LAUNCHER STOPS SUDDENLY

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)

References — Continued:
CIRCUIT CARD ASSEMBLIES (Page 11-265)
ELECTRICAL ENCLOSURE ASSEMBLY AND AND SHOCK MOUNTS (Page 11-5)
LEFT JAMMED MINE OUTPUT SENSOR (Page 4-111)
LEFT MINE INPUT PROXIMITY SENSOR (Page 4-189)
LEFT MINE INPUT PROXIMITY SENSOR ACCESS COVER (Page 4-187)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
RIGHT JAMMED MINE OUTPUT SENSOR (Page 4-117)
RIGHT MINE INPUT PROXIMITY SENSOR (Page 4-195)
SOLENOID VALVE ASSEMBLY (Page 4-91)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. RUN/TEST Switch on B.I.T.E./ALARM CONTROL PANEL (BACP) to RUN.
Turn following BACP circuits breakers on:
- MAIN POWER Circuit Breaker S2.
- ELEC POWER Circuit Breaker S3.
- GAUGES Circuit Breaker S4.
- SENSOR/VALVES Circuit Breaker S5.

MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
LAUNCHER BRAKE SOL Lamp L36 on BACP lit, and LAUNCHER WH POWER Lamp L37 on BACP off?
If yes: Go to STEP 2.
If no: Go to Step 3.

STEP 2. Disconnect P56 from J56.
Multimeter (+) probe on P56, Socket B.
Multimeter (−) probe on bare metal ground.
Between 3800 and 4200 ohms?
If yes: Replace solenoid valve assembly (Page 4-91).
Check launcher does not stop suddenly.
If no: Go to STEP 9.

Step 3. LAUNCHER BRAKE SOL Lamp L36 and LAUNCHER WH POWER Lamp L37 on BACP lit?
If yes: Go to STEP 4.
If no: Go to STEP 6.

STEP 4. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Items 16 and 17, Left and Right JAMMED MINE Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 5.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher does not stop suddenly.

STEP 5. Remove launcher left mine input proximity sensor access cover from launcher (Page 4-187).
Disconnect P51 from J51.
Press MALFUNCTION INDICATORS RESET Switch S9 on BACP.
LAUNCHER BRAKE SOL Lamp L36 and LAUNCHER WH POWER Lamp L37 on BACP off?
If yes: Replace left mine input proximity sensor (Page 4-189).
Check launcher does not stop suddenly.
If no: Go to STEP 10.

STEP 6. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Items 16 and 17, Left and Right JAMMED MINE Circuits (TM 9-1095-205-20).
LAUNCHER BRAKE SOL Lamp L36 and LAUNCHER WH POWER Lamp L37 on BACP come on as required?
If yes: Go to STEP 7.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher does not stop suddenly.

STEP 7. Open BACP (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 103.
Multimeter (−) probe on Terminal Board 1TB, Part 6, Terminal 2.
Helper press left magazine output proximity sensor arm (Page 3-15).
More than 9 V dc?
If yes: Go to Step 8.
If no: Go to STEP 11.

Step 8. Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 104.
Multimeter (−) probe on Terminal Board 1TB, Part 6, Terminal 2.
Helper press left magazine output proximity sensor arm (Page 3-15).
More than 9 V dc?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher does not stop suddenly.
If no: Go to STEP 14.

STEP 9. Disconnect three Leads 105 from Terminal Board 1TB, Part 6, Terminal 105 (Page 11-49).
Disconnect P9 from J9.
Multimeter (+) probe on J9, Socket B.
Multimeter (−) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.
If no: Go to STEP 17.

2-6.26 LAUNCHER STOPS SUDDENLY — Continued

STEP 10. Open swivel joint access door (TM 9-1095-205-10).
Disconnect P52 from J52.
Press and release MALFUNCTION INDICATORS RESET Switch S9 on BACP.
LAUNCHER BRAKE SOL Lamp L36 and LAUNCHER WH POWER Lamp L37 on BACP go out?
If yes: Replace right mine input proximity sensor (Page 4-195).
Check launcher does not stop suddenly.
If no: Go to Step 19.

STEP 11. Remove left mine input proximity sensor access cover from launcher (Page 4-187).
Disconnect P53 from J53.
Multimeter (+) probe on P53, Socket B.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 12.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.

Step 12. MASTER POWER switch on MCP off.
Multimeter (+) probe on P53, Socket F.
Multimeter (−) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Go to Step 13.
If no: Go to Step 21.

Step 13. Multimeter (+) probe on P53, Socket D.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace left jammed mine output sensor (Page 4-111).
Check launcher does not stop suddenly.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.

STEP 14. Disconnect P54 from J54.
Multimeter (+) probe on P54, Socket B.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 15.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.

Step 15. MASTER POWER switch on MCP off.
Multimeter (+) probe on P54, Socket F.
Multimeter (−) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Go to Step 16.
If no: Go to Step 22.

Step 16. Multimeter (+) probe on P54, Socket D.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace right jammed mine output sensor (Page 4-117).
Check launcher does not stop suddenly.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.

STEP 17. Disconnect P17A from J17A.
Multimeter (+) probe on J17A, Pin 29.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Go to STEP 18.
If no: Go to STEP 23.

STEP 18. Connect P17A to J17A.
Disconnect P30 from J80.
Multimeter (+) probe on J80, Pin B.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Cable Assembly J80 (11-5).
Check launcher does not stop suddenly.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher does not stop suddenly.

Step 19. Multimeter (+) probe on P52, Socket F.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 20.
If no: Go to STEP 24.

STEP 20. Open BACP (Page 11-5).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 101.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.
If no: Go to Step 25.

Step 21. Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 103.
Multimeter (–) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.
If no: Go to STEP 26.

Step 22. Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 104.
Multimeter (–) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.
If no: Go to STEP 27.

2-6.26 LAUNCHER STOPS SUDDENLY — Continued

STEP 23. Connect P17A to J17A.
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin C9.
Multimeter (–) probe on bare metal ground.
Less than infinite ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check launcher does not stop suddenly.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher does not stop suddenly.

STEP 24. Open BACP (Page 11-5).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 102.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher does not stop suddenly.
If no: Go to Step 28.

Step 25. Multimeter (+) probe on Rotary Switch 14SW, Terminal B2.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check launcher does not stop suddenly.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher does not stop suddenly.

STEP 26. Disconnect P80 from J80.
Multimeter (+) probe on P80, Socket U.
Multimeter (–) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check launcher does not stop suddenly.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher does not stop suddenly.

STEP 27. Disconnect P80 from J80.
Multimeter (+) probe on P80, Socket T.
Multimeter (–) probe on bare metal ground.
Between 9,000 and 11,000 ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check launcher does not stop suddenly.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher does not stop suddenly.

Step 28. Multimeter (+) probe on Rotary Switch 14SW, Terminal B3.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check launcher does not stop suddenly.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check launcher does not stop suddenly.

END OF TASK

2-6.27 LAUNCHED MINES IMPACT LESS THAN 100 FT (30.5 M) FROM CHASSIS

INITIAL SETUP

References:

TM 9-1095-205-10
CENTER GUIDE GROUP (Page 4-263)
FRICTION LINING AND CLENCHING RIM CLAMP GROUP (Page 4-323)
INNER SIDE GUIDE GROUP (Page 4-303)
LAUNCHER ASSEMBLY (Page 4-7)
OUTER SIDE GUIDE GROUP (Page 4-249)

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Open launcher wheel access door (TM 9-1095-205-10).
Inspect launcher assembly for damaged launcher guides (Page 4-7).
Inspect friction liner for damage. Friction liner should not be visibly dented or out-of-round.
Guide(s) or friction liner damaged?

If yes: Replace damaged guide(s) or friction liner (Pages 4-249, 4-263, 4-303 or 4-323).
Check that launched mines impact more than 100 ft (30.5 m) from chassis.

If no: Adjust launcher guides (Pages 4-249, 4-263, 4-303 or 4-323).
Check that launched mines impact more than 100 ft (30.5 m) from chassis.

END OF TASK

2-6.28 LAUNCHER WILL NOT LAY MINES IN SELECTED PATTERN

INITIAL SETUP

Test Equipment:
Hydraulic systems test and repair tool outfit (HSTRU) 4940-00-036-5784:
  Pressure gage
  Hand pump
  System tester
Multimeter 6625-00-999-6282

Tools:
General mechanic's tool kit 5180-00-177-7033:
  6 inch adjustable wrench
1/8 inch flat tip screwdriver 5120-00-227-7377
Metal cap 4730-00-625-2212

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E./ALARM PANEL ASSEMBLY (Page 11-195)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LAUNCHER POSITION POTENTIOMETER ELECTRICAL ASSEMBLY (Page 5-49)
OSCILLATOR DRIVE (Page 5-5)
OSCILLATOR HYDRAULIC INSTALLATION (Page 9-47)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
Helper observe launcher oscillation.
LAUNCHER START switch on OCB to START, and hold until LAUNCHER READY light on OCB comes on.
JOG switch on OCB to RIGHT.
JOG switch on OCB to LEFT.
PATTERN SELECTOR switch on OCB to 5.
PATTERN SELECTOR switch on OCB to 4.
PATTERN SELECTOR switch on OCB to 3.
PATTERN SELECTOR switch on OCB to 2.
PATTERN SELECTOR switch on OCB to 1.
Stop engine (TM 9-1095-205-20).
Launcher oscillate in all patterns selected?
  If yes: Go to Step 2.
  If no: Go to STEP 6.

Step 2. Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
Helper observe launcher base to determine if launcher oscillates equal distance from launcher marker reference line.
PATTERN SELECTOR switch on OCB to 3.

Step 2. — Continued

LAUNCHER START switch on OCB to START, and hold until LAUNCHER READY light on OCB comes on.
Launcher oscillate equal distance from launcher marker reference line?
- If yes: Go to STEP 3.
- If no: Go to STEP 13.

STEP 3. Perform manual bypass valve operational test (Page 9-47).
Class III leak?
- If yes: Replace manual bypass valve (Page 9-47).
  Check launcher will lay mines in selected pattern.
- If no: Go to STEP 4.

STEP 4. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to Test Point TP18.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START, and hold until LAUNCHER READY light on OCB comes on.
Hold JOG switch on OCB to LEFT for 5 seconds.
Hold JOG switch on OCB to RIGHT for 5 seconds.
Release JOG switch.
Pressure more than 1475 psi (10,180.75 kPa) at any time JOG switch was moved?
- If yes: Go to Step 5.
- If no: Go to STEP 14.

Step 5. Inspect oscillator hydraulic installation hoses and tubes for damage that would restrict flow (Page 9-47).
Hose or tube damaged?
- If yes: Replace damaged tubes or hoses (Page 9-47).
  Check launcher will lay mines in selected pattern.
- If no: Replace directional control valve (Page 9-47).
  Check launcher will lay mines in selected pattern.

STEP 6. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 13, DISPENSE CIRCUITS (TM 9-1095-205-20).
D04 Lamp L41, D05 Lamp L42, and D06 Lamp L43 on BACP come on if required?
- If yes: Go to Step 7.
- If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
  Check launcher will lay mines in selected pattern.

Step 7. SLEW LEFT Lamp L54 and SLEW RIGHT Lamp L55 blink alternately as required?
- If yes: Go to STEP 8.
- If no: Replace Circuit Card Assembly CCA4 (Page 11-265).

STEP 8. Test launcher position potentiometer electrical assembly (Page 5-49).
Multimeter needle change smoothly?
- If yes: Go to Step 9.
- If no: Replace launcher position potentiometer electrical assembly (Page 5-49).
  Check launcher will lay mines in selected pattern.

2-6.28 LAUNCHER WILL NOT LAY MINES IN SELECTED PATTERN — Continued

Step 9. Multimeter needle move from between −5.5 and −6.5 V dc to between 5.5 and 6.5 V dc?
If yes: Go to STEP 10.
If no: Adjust launcher position potentiometer (Page 5-49).
Check launcher will lay mines in selected pattern.

STEP 10. ENGINE START/FUEL ON/OFF switch on OCB OFF.
Disconnect P4 from J4.
MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
Multimeter (+) probe on J4, Socket a.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 11.
If no: Go to STEP 16.

Step 11. Multimeter (+) probe on J4, Socket J.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 12.
If no: Go to STEP 17.

Step 12. Multimeter (+) probe on J4, Socket K.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check launcher will lay mines in selected pattern.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher will lay mines in selected pattern.

STEP 13. Open BITE panel door (TM 9-1095-205-10).
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
Loosen LAUNCHER POS POT resistor adjustment screw jam nut on BACP. Use 6 inch adjustable wrench.
Helper observe launcher base to determine if launcher oscillates equal distance from launcher marker reference line.
Turn LAUNCHER POS POT resistor adjustment screw on BACP until launcher oscillates equal distance from launcher marker reference line. Use 1/8 inch flat tip screwdriver.
Launcher center?
If yes: Check launcher will lay mines in selected pattern.
If no: Go to STEP 18.

STEP 14. Remove oscillator hydraulic installation relief valve from dispenser (Page 9-47).
Cap one end of relief valve tee.
Connect HSTRU hand pump to other end of relief valve tee.
Remove plug from relief valve adapter (Page 9-47).
Operate hand pump until pressure is 1450 psi (9990.5 kPa).
Hydraulic oil flow from adapter port?
If yes: Replace oscillator hydraulic installation relief valve (Page 9-47).
Check launcher will lay mines in selected pattern.
If no: Go to STEP 15.

STEP 15. Install plug on relief valve adapter (Page 9-47).
Remove HSTRU hand pump from relief valve tee.
Remove cap from relief valve tee.
Install oscillator hydraulic installation relief valve on dispenser (Page 9-47).
Open manual bypass valve (TM 9-1095-205-10).
Center launcher (Page 5-5).
Close manual bypass valve (TM 9-1095-205-10).
Push and pull launcher.
Launcher marker move more than 1.5 in. (4.8 cm) on either side of reference mark?
If yes: Remove, disassemble, reassemble, and install oscillator drive rotary actuator (Page 5-5).
Check launcher will lay mines in selected pattern.
If no: Go to STEP 19.

STEP 16. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 31.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check launcher will lay mines in selected pattern.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher will lay mines in selected pattern.

STEP 17. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 32.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check launcher will lay mines in selected pattern.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher will lay mines in selected pattern.

STEP 18. Set multimeter for V dc.
Multimeter (+) probe on P2 Lead B14 at Resistor R5, Terminal 3.
Multimeter (–) probe on bare metal ground.
Turn LAUNCHER POS POT resistor adjustment screw on BACP. Use 1/8 inch flat tip screwdriver.
Multimeter needle move smoothly?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-195).
Check launcher will lay mines in selected pattern.
If no: Replace Resistor R5 (Page 11-195).
Check launcher will lay mines in selected pattern.

2-6.28 LAUNCHER WILL NOT LAY MINES IN SELECTED PATTERN — Continued

STEP 19. Disconnect oscillator pump output hose from output elbow (Page 15-275).
Connect HSTRU system tester to output elbow.
Start engine (TM 9-1095-205-10).
Flow more than 3.5 gal/min (13.25 L/min) at 1475 psi (10,180.75 kPa)?
If yes: Replace directional control valve (Page 9-47).
Check launcher will lay mines in selected pattern.
If no: Replace oscillator pump (Page 15-275).
Check launcher will lay mines in selected pattern.

END OF TASK

2-6.29 LAUNCHER WILL NOT OSCILLATE

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
  System tester
  Pressure gage

Personnel Required:

Electrical repairer
Helper

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)

References — Continued:

CIRCUIT CARD ASSEMBLIES (Page 11-265)
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LAUNCHER POSITION POTENTIOMETER ELECTRICAL ASSEMBLY (Page 5-49)
OSCILLATOR DRIVE (Page 5-5)
OSCILLATOR DRIVE GEARS (Page 5-43)
OSCILLATOR HYDRAULIC INSTALLATION (Page 9-47)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
RUN/TEST Switch S1 on BACP to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to 3.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
SLEW LEFT Lamp L54 and SLEW RIGHT Lamp L55 on BACP blink alternately?
  If yes: Go to STEP 2.
  If no: Go to STEP 18.

STEP 2. Stop engine (TM 9-1095-205-20).
RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 3.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
SLEW LEFT Lamp L54 and SLEW RIGHT Lamp L55 on BACP blink alternately?
  If yes: Replace rotary actuator shaft (Page 5-5).
  Check launcher oscillates.
  If no: Go to STEP 3.

2-6.29 LAUNCHER WILL NOT OSCILLATE — Continued

STEP 3. Stop engine (TM 9-1095-205-20).
Open manual bypass valve (TM 9-1095-205-10).
Open BACP (Page 11-49).
Set multimeter for DC voltage.
MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 83.
Multimeter (−) probe on Terminal Board 1TB, Part 5, Terminal 84.
Helper rotate launcher right and left.
Multimeter needle move?
If yes: Go to Step 4.
If no: Go to STEP 16.

Step 4. Helper rotate launcher right and left to mechanical stops.
Multimeter needle move from between −6 and −7 V dc to between 6 and 7 V dc?
If yes: Go to STEP 5.
If no: Go to STEP 14.

STEP 5. Close manual bypass valve (TM 9-1095-205-10).
Remove multimeter probes from Terminal Board 1TB.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
Observe launcher for movement.
Helper press directional control valve left override button (Page 9-47).
Helper press directional control valve right override button (Page 9-47).
Launcher move?
If yes: Go to STEP 6.
If no: Go to STEP 11.

STEP 6. Stop engine (TM 9-1095-205-20).
Disconnect P41 from J41.
Multimeter (+) probe on P41, Socket A.
Multimeter (−) probe on bare metal ground.
MASTER POWER switch on MCP ON.
More than 18 V dc?
If yes: Go to Step 7.
If no: Replace Cable Assembly P41 (Page 16-3).
Check launcher oscillates.

Step 7. Multimeter (+) probe on P41, Socket B.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 10.
If no: Go to Step 8.

Step 8. Multimeter (+) probe on P41, Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace directional control valve (Page 9-47).
Check launcher oscillates.
If no: Go to Step 9.

Step 9. Connect P41 to J41.
Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 74.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Cable Assembly P41 (Page 16-3).
Check launcher oscillates.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher oscillates.

Step 10. Connect P41 to J41.
Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 73.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Cable Assembly P41 (Page 16-3).
Check launcher oscillates.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher oscillates.

STEP 11. Stop engine (TM 9-1095-205-20).
Disconnect oscillator pump output hose from output elbow (Page 15-275).
Connect HSTRU system tester to oscillator pump output elbow (Page 15-275).
Start engine (TM 9-1095-205-10).
Flow more than 3.5 gal/min (0.22 L/sec) when pressure is 1475 psi (10,162.8 kPa)?
If yes: Go to STEP 12.
If no: Replace oscillator pump (Page 15-275).
Check launcher oscillates.

STEP 12. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU system tester from oscillator pump output elbow.
Connect oscillator pump output hose to output elbow (Page 15-275).
Disconnect directional control valve supply tube assembly from elbow (Page 9-47).
Connect HSTRU pressure gage to valve supply tube assembly.
Start engine.
More than 1475 psi (10,162.8 kPa)?
If yes: Go to STEP 13.
If no: Replace oscillator single relief valve (Page 9-47).
Check launcher oscillates.

STEP 13. Stop engine (TM 9-1095-205-20).
Disconnect HSTRU pressure gage from valve supply tube assembly.
Connect directional control valve supply tube assembly to elbow (Page 9-47).
Perform manual bypass valve operational test (Page 9-47).
Valve pass test?
If yes: Replace rotary actuator (Page 5-5).
Check launcher oscillates.
If no: Replace manual bypass valve (Page 9-47).
Check launcher oscillates.

2-6.29 LAUNCHER WILL NOT OSCILLATE — Continued

STEP 14. Remove potentiometer assembly cover from launcher (Page 5-5).
Check gears for damage or disengagement.
Gears damaged or disengaged?
If yes: Go to Step 26.
If no: Go to Step 15.

Step 15. Adjust and test launcher position potentiometer electrical assembly (Page 5-49).
Potentiometer pass test?
If yes: Check launcher oscillates.
If no.: Replace launcher position potentiometer electrical assembly (Page 5-49).
Check launcher oscillates.

STEP 16. Remove potentiometer assembly cover from launcher (Page 5-5).
Check gears for damage or disengagement.
Gears damaged or disengaged?
If yes: Go to Step 27.
If no: Go to Step 17.

Step 17. Adjust and test launcher position potentiometer electrical assembly (Page 5-49).
Potentiometer pass test?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check launcher oscillates.
If no: Replace launcher position potentiometer electrical assembly (Page 5-49).
Check launcher oscillates.

STEP 18. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 13, DISPENSE CIRCUITS (TM 9-1095-205-20).
Following BACP lamps come on if required.
D04 Lamp L41?
D05 Lamp L42?
D06 Lamp L43?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check launcher oscillates.
If no: Go to Step 19.

Step 19. Following BACP lamps come on if required:
PATTERN 1 Lamp L6?
PATTERN 2 Lamp L7?
PATTERN 3 Lamp L8?
PATTERN 4 Lamp L9?
PATTERN 5 Lamp L10?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher oscillates.
If no: Go to STEP 20.

STEP 20. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 31.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 21.
If no: Go to Step 25.

Step 21. Multimeter (+) probe on Terminal Board 4TB, Terminal 32.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 22.
If no: Go to Step 24.

Step 22. Multimeter (+) probe on Terminal Board 4TB, Terminal 33.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check launcher oscillates.
If no: Go to Step 23.

Step 23. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 33.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher oscillates.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher oscillates.

Step 24. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 32.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher oscillates.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher oscillates.

Step 25. Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 31.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher oscillates.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher oscillates.

Step 26. Gears disengaged?
If yes: Adjust launcher position potentiometer electrical assembly (Page 5-49).
Check launcher oscillates.
If no: Replace damaged oscillator drive gears (Page 5-43).
Check launcher oscillates.

2-6.29 LAUNCHER WILL NOT OSCILLATE — Continued

Step 27. Gears disengaged?
If yes: Adjust launcher position potentiometer electrical assembly (Page 5-49).
Check launcher oscillates.
If no: Replace damaged oscillator drive gears (Page 5-43).
Check launcher oscillates.

END OF TASK

2-6.30 LAUNCHER OSCILLATES ERRATICALLY

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
  Hydraulic system tester
Multimeter 6625-00-999-6282

References:

TM 9-1095-205-10
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LAUNCHER POSITION POTENTIOMETER ELECTRICAL ASSEMBLY (Page 5-49)

References — Continued:

OSCILLATOR DRIVE (Page 5-5)
OSCILLATOR HYDRAULIC INSTALLATION (Page 9-47)
TERMINAL PANEL ASSEMBLY (Page 11-49)

Personnel Required:

Electrical repairer
Helper

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

his symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP) Item 13, DISPENSE Circuits (TM 9-1095-205-20).
Dispense circuits pass checkout?
  If yes: Go to Step 2.
  If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
  Check launcher oscillates normally.

Step 2. RUN/TEST Switch S1 on B.I.T.E./ALARM CONTROL PANEL (BACP) to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START.
Observe launcher.
JOG switch on OCB to LEFT.
JOG switch on OCB to RIGHT.
Launcher move smoothly from left stop to right stop?
  If yes: Go to STEP 3.
  If no: Go to Step 10.

2-6.30 LAUNCHER OSCILLATES ERRATICALLY — Continued

STEP 3. Stop engine (TM 9-1095-205-20).
Disconnect P37 from J37.
Multimeter (+) probe on J37, Pin A.
Multimeter (−) probe on J37, Pin B.
Open manual bypass valve (TM 9-1095-205-10).
Rotate launcher until multimeter indicates 500 ohms.
Multimeter (+) probe on J37, Pin D.
Multimeter 500 ohms?
If yes: Go to Step 4.
If no: Replace launcher position potentiometer (Page 5-49).
Check launcher oscillates normally.

Step 4. Rotate launcher to right mechanical stop.
Rotate launcher to left mechanical stop.
Resistance vary smoothly between 1 and 1000 ohms?
If yes: Go to Step 5.
If no: Replace launcher position potentiometer (Page 5-49).
Check launcher oscillates normally.

Step 5. Multimeter (+) probe on J37, Pin D.
Multimeter (−) probe on J37, Pin C.
Record resistance.
Multimeter (+) probe on J37, Pin A.
Multimeter (−) probe on J37, Pin C.
Record resistance.
Resistance in both cases 382 ohms?
If yes: Go to Step 6.
If no: Replace launcher position potentiometer (Page 5-49).
Check launcher oscillates normally.

Step 6. Multimeter (+) probe on J37, Pin A.
Multimeter (−) probe on J37, Pin D.
Multimeter 505 ohms?
If yes: Go to Step 7.
If no: Replace launcher position potentiometer (Page 5-49).
Check launcher oscillates normally.

Step 7. Multimeter (+) probe on J37, Pin B.
Multimeter (−) probe on J37, Pin C.
Rotate launcher to right mechanical stop.
Rotate launcher to left mechanical stop.
Resistance vary smoothly between 511 and 1511 ohms?
If yes: Go to STEP 8.
If no: Replace launcher position potentiometer (Page 5-49).
Check launcher oscillates normally.

STEP 8. Disconnect P9 from J9.
Perform continuity check between P37 and P9. (See P37/P9 Continuity List, Page 2-121.)

P37/P9 CONTINUITY LIST

Multimeter (+) Probe on P37, Pin	Multimeter (−) Probe on P9, Pin
A	d
B	k
C	f
D	l

All readings 0 ohms?
  If yes: Go to STEP 9.
  If no: Replace launcher internal wiring harness (TM 9-1095-205-20).
  Check launcher oscillates normally.

STEP 9. Disconnect P1 from J1.
Perform continuity check between Cable Assembly P1 and Terminal Board 1TB. (See following P1/1TB Continuity List for pin and terminal locations.)

P1/1TB CONTINUITY LIST

Multimeter (+) Probe on P17, Pin	Multimeter (−) Probe on Terminal Board 1TB	
	Part No.	Terminal
G9	3	2
G15	1	17
P7	5	83
R10	5	84

All readings 0 ohms?
  If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
  Check launcher oscillates normally.
  If no: Replace Cable Assembly P1 (Page 11-49).
  Check launcher oscillates normally.

Step 10. Observe launcher movement.
Helper press and release either manual override button on oscillator hydraulic installation directional control valve (Page 9-47).
Helper press and release other manual override button on oscillator hydraulic installation directional control valve.
Launcher move smoothly between left and right mechanical stop?
  If yes: Go to STEP 11.
  If no: Go to STEP 12.

2-6.30 LAUNCHER OSCILLATES ERRATICALLY — Continued

STEP 11. Disconnect P41 from J41.
Multimeter (+) probe on P41, Pin A.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace oscillator hydraulic installation directional control valve (Page 9-47).
Check launcher oscillates normally.
If no: Replace oscillator solenoid valve Cable Assembly P41 (Page 16-3).
Check launcher oscillates normally.

STEP 12. Stop engine (TM 9-1095-205-20).
Disconnect oscillator pump output hose from output elbow (Page 15-275).
Connect HSTRU hydraulic system tester to oscillator pump output elbow.
Start engine (TM 9-1095-205-10).
Flow more than 3.5 gal/min (13.25 L/min) at 1475 psi (10,180.75 kPa)?
If yes: Replace rotary actuator (Page 5-5).
Check launcher oscillates normally.
If no: Replace oscillator pump (Page 15-275).
Check launcher oscillates normally.

END OF TASK

2-6.31 LAUNCHER OSCILLATES TOO SLOWLY

INITIAL SETUP

Test Equipment:

Hydraulic systems test and repair tool outfit (HSTRU) 4940-01-036-5784:
  Hand pump
  Hydraulic system tester
  Pressure gage

Tools:

General mechanic's tool kit 5180-00-177-7033:
  6 inch steel rule
Goggles 4240-00-269-7912
Metal cap 4730-00-625-2212

References:

TM 9-1095-205-10
TM 9-1095-205-20
HYDRAULIC SYSTEM SCHEMATIC: ENGINE ON, NO EQUIPMENT OPERATING (FO-1)
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LAUNCHER ASSEMBLY MARKER (Page 4-201)
OSCILLATOR DRIVE (Page 5-5)
OSCILLATOR HYDRAULIC INSTALLATION (Page 9-47)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Perform manual bypass valve operational test (Page 9-47).
Less than class 3 leak?
  If yes: Go to STEP 2.
  If no: Replace manual bypass valve (Page 9-47).
    Check launcher oscillates at normal speed.

STEP 2. Stop engine (TM 9-1095-205-20).
Connect HSTRU pressure gage to hydraulic Test Point TP18 (FO-1)
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
JOG switch on OCB to RIGHT or LEFT.
More than 1475 psi (10,162.8 kPa)?
  If yes: Go to Step 3.
  If no: Go to STEP 4.

Step 3.

WARNING

Dirt and dispenser fluids may hurt your eyes. Wear goggles when working under the chassis.

Stop engine (TM 9-1095-205-20).
Inspect oscillator hydraulic installation tubes for damage that would restrict fluid flow (Page 9-47).
Tubes damaged?

2-6.31 LAUNCHER OSCILLATES TOO SLOWLY — Continued

Step 3. — Continued

If yes: Replace or repair damaged tubes (Page 9-47).
Check launcher oscillates at normal speed.

If no: Replace oscillator directional control valve (Page 9-47).
Check launcher oscillates at normal speed.

STEP 4. Stop engine (TM 9-1095-205-20).
Remove relief valve from dispenser (Page 9-47).
Remove caps from relief valve tee ports and return port (Page 9-47).
Install HSTRU metal cap on one end of tee.
Install HSTRU hand pump on other end of tee.
Operate hand pump until pressure reads 1450 psi (9,990.50 kPa).
Fluid flowing from relief valve return port?

If yes: Replace oscillator relief valve (Page 9-47).
Check launcher oscillates at normal speed.

If no: Go to STEP 5.

STEP 5. Install relief valve on dispenser (Page 9-47).
Open manual bypass valve (TM 9-1095-205-10).
Aline launcher marker with center mark (Page 4-201).
Close manual bypass valve (TM 9-1095-205-10).
Move launcher right. Measure and note distance launcher travels from center mark. Use steel rule.
Move launcher left. Measure and note distance launcher travels from center mark. Use steel rule.
Add distances.
Combined distance more than 1.5 in. (38.1 mm)?

If yes: Replace rotary actuator preformed packings (Page 5-5).
Check launcher oscillates at normal speed.

If no: Go to STEP 6.

STEP 6. Disconnect oscillator pump output hose assembly from oscillator pump (Page 15-275).
Connect HSTRU hydraulic system tester to oscillator pump output port.
Start engine (TM 9-1095-205-10).
Move throttle to MAX position (TM 9-1095-205-10).
More than 3.5 gal/min (13.3 L/min)?

If yes: Replace oscillator directional control valve (Page 9-47).
Check launcher oscillates at normal speed.

If no: Replace oscillator pump (Page 9-47).
Check launcher oscillates at normal speed.

END OF TASK

2-6.32 LAUNCHER VIBRATES OR IS NOISY WHEN RUNNING

INITIAL SETUP

References:
TM 9-1095-205-10
TM 9-1095-205-20
HYDRAULIC MOTOR AND CLUTCH DRIVE (Page 4-207)
LAUNCHER WHEEL BRAKE ASSEMBLY (Page 4-147)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Stop engine (TM 9-1095-205-20).
Open launcher wheel access door (TM 9-1095-205-10).
Try to move launcher wheel in and out.
Any movement?
If yes: Replace launcher wheel brake assembly bearings (Page 4-147).
Check that launcher neither vibrates nor is noisy when running.
If no: Go to STEP 2.

STEP 2.

WARNING

Parts rotating at high speeds can harm you. Keep objects away from parts rotating at high speeds.

Remove wheel hub assembly (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
Hold LAUNCHER START switch on OCB in START until LAUNCHER READY lamp on OCB comes on.
Visually check that launcher wheel brake assembly shaft is rotating smoothly.
Shaft rotating smoothly?
If yes: Go to STEP 3.
If no: Replace launcher wheel brake assembly shaft (Page 4-147).
Check that launcher neither vibrates nor is noisy when running.

STEP 3. Remove launcher hydraulic motor (Page 4-207).
Launcher hydraulic motor shaft rotate easily?
If yes: Replace launcher hydraulic motor (Page 4-207).
Check that launcher neither vibrates nor is noisy when running.
If no: Replace launcher wheel brake assembly bearings (Page 4-147).
Check that launcher neither vibrates nor is noisy when running.

END OF TASK

2-6.33 LAUNCHER WHEEL WILL NOT STOP WHEN MODE SELECT SWITCH IS SET TO OFF OR LOAD/UNLOAD

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. OPERATOR CONTROL PANEL TEST DISPENSE Lamp L1 on B.I.T.E./ALARM CONTROL PANEL (BACP) go off when MODE SELECT switch on operator control box (OCB) set to OFF?
If yes: Go to STEP 2.
If no: Go to STEP 5.

STEP 2. Remove cover from BACP (TM 9-1095-205-20).
D01 Lamp L38 off?
If yes: Go to Step 3.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.

Step 3. CONTROL LOGIC CCA4 LAUNCHER RUN Lamp L53 on BACP off?
If yes: Go to STEP 4.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.

STEP 4. Open BACP (Page 11-49).
Remove two Leads 75 from Terminal Board 1TB, Part 5, Terminal 75.
Disconnect P1 from J1.
Multimeter (+) probe on Cable Assembly P1, Pin 11.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.
If no: Replace Launcher Wheel Solenoid Valve Cable Assembly P42 (Page 16-3).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.

STEP 5. MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Disconnect P4 from J4.
Open BACP (Page 11-49).
Remove two Leads 29 from Terminal Board 1TB, Part 1, Terminal 29.
Remove cover from Junction Box JB4 (Page 16-139).
Remove JB4 Lead 29 from Terminal Board 4TB, Terminal 29.
Multimeter (+) probe on Connector Assembly J4, Lead 29.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.
If no: Go to Step 6.

Step 6. Multimeter (+) probe on Wire Bundle Assembly JB4, Lead 29.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.
If no: Replace Cable Assembly P1 (Page 11-49).
Check launcher wheel will stop when MODE SELECT switch is set to OFF or LOAD/UNLOAD.

END OF TASK

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262

Tools:
24 V dc power supply 6625-00-841-8917

References:
OPERATOR CONTROL BOX (Page 10-3)
OPERATOR'S CONTROL PANEL ASSEMBLY (Page 10-17)

Personnel Required:
Electrical repairer

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. Perform Part I of Operator Control Box Test (OCBT) (Page 10-17).
OCB pass test?
If yes: Go to Step 2.
If no: Go to Step 57.

Step 2. 24 V dc power supply (+) lead on J5, Pin M, and 24 V dc power supply (−) lead on J5, Pin H.
INDICATOR LIGHTS switch on operator control box (OCB) to TEST.
All lamps on OCB come on?
If yes: Go to Step 3.
If no: Go to Step 33.

Step 3. Perform Step 1, Part II, of OCBT (Page 10-17).
OCB pass test?
If yes: Go to Step 4.
If no: Go to Step 21.

Step 4. Perform Step 2, Part II, of OCBT (Page 10-17).
OCB pass test?
If yes: Go to Step 5.
If no: Go to Step 9.

Step 5. Perform Step 3, Part II, of OCBT (Page 10-17).
OCB pass test?
If yes: Go to STEP 6.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 6. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Potentiometer R1, Terminal 1.
Multimeter (−) probe on Potentiometer R1, Terminal 2.
Between 1000 and 0 ohms when PANEL ILLUMINATION knob on OCB is turned from DIM to BRIGHT?
If yes: Go to STEP 7.
If no: Replace Potentiometer R1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 7. Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 3.
Multimeter (−) probe on J50, Socket 2.
Less than 1167 ohms?
If yes: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 8.

Step 8. Multimeter (+) probe on P3, Socket 3.
Multimeter (−) probe on J50, Socket 1.
Less than 2 ohms?
If yes: Replace operator's control panel assembly (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 9. RIGHT MAGAZINE MINE COUNT display on OCB count up and down?
If yes: Go to STEP 10.
If no: Go to Step 11.

STEP 10. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on center terminal of Lamp DS1.
Multimeter (−) probe on Counter M13, Terminal 6.
Less than 2 ohms?
If yes: Replace Counter M13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 11. RIGHT MAGAZINE MINE COUNT display count up?
If yes: Go to STEP 12.
If no: Go to STEP 17.

STEP 12. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Counter M13, Terminal 1.
Multimeter (−) probe on J5, Pin D.
Between 15 and 25 ohms?
If yes: Replace Counter M13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 13.

STEP 13. Disconnect P3 from J3.
Multimeter (+) probe on Counter M13, Terminal 1.
Multimeter (−) probe on P3, Socket 39.
Less than 2 ohms?
If yes: Go to Step 14.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

Step 14. Multimeter (+) probe on J3, Pin 39.
Multimeter (–) probe on J3, Pin 45.
Less than 2 ohms?
If yes: Go to Step 15.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 15. Multimeter (+) probe on P3, Socket 45.
Multimeter (–) probe on J3, Pin D.
Less than 2 ohms?
If yes: Go to Step 16.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 16. Multimeter (+) probe on J3, Pin 39.
Multimeter (–) probe on J3, Pin 45.
Less than 2 ohms?
If yes: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Counter M13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 17. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Counter M13, Terminal 4.
Multimeter (–) probe on J5, Pin C.
Between 15 and 25 ohms?
If yes: Replace Counter M13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 18.

STEP 18. Disconnect P3 from J3.
Multimeter (+) probe on Counter M13, Terminal 4.
Multimeter (–) probe on P3, Socket 37.
Less than 2 ohms?
If yes: Go to Step 19.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 19. Multimeter (+) probe on J3, Pin 37.
Multimeter (–) probe on J3, Pin 47.
Between 15 and 25 ohms?
If yes: Go to Step 20.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 20. Multimeter (+) probe on P3, Socket 47.
Multimeter (–) probe on J3, Pin 47.
Between 15 and 25 ohms?
If yes: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 21. LEFT MAGAZINE MINE COUNT on OCB display count up and down?
If yes: Go to STEP 22.
If no: Go to Step 23.

STEP 22. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on center terminal of Lamp DS1.
Multimeter (–) probe on Counter M12, Terminal 6.
Less than 2 ohms?
If yes: Replace Counter M12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 23. LEFT MAGAZINE MINE COUNT display on OCB count up?
If yes: Go to STEP 24.
If no: Go to STEP 29.

STEP 24. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Counter M12, Terminal 1.
Multimeter (–) probe on J5, Pin B.
Between 15 and 25 ohms?
If yes: Replace Counter M12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 25.

STEP 25. Disconnect P3 from J3.
Multimeter (+) probe on Counter M12, Terminal 1.
Multimeter (–) probe on P3, Socket 40.
Less than 2 ohms?
If yes: Go to Step 26.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 26. Multimeter (+) probe on J3, Pin 40.
Multimeter (–) probe on J3, Pin 44.
Between 15 and 25 ohms?
If yes: Go to Step 27.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 27. Multimeter (+) probe on P3, Socket 44.
Multimeter (–) probe on J5, Pin B.
Less than 2 ohms?
If yes: Go to Step 28.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS IN OPERATOR CONTROL BOX — Continued

Step 28. Multimeter (+) probe on J3, Pin 46.
Multimeter (−) probe on J3, Pin 40.
Less than 2 ohms?
If yes: Replace diode board (Page 10-3).
Check that OCB passes both parts of OCBT (Page 10-17).
If no: Replace Counter M12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 29. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Counter M12, Terminal 4.
Multimeter (−) probe on J5, Pin A.
Between 15 and 25 ohms?
If yes: Replace Counter M12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 30.

STEP 30. Disconnect P3 from J3.
Multimeter (+) probe on Counter M12, Terminal 4.
Multimeter (−) probe on P3, Socket 38.
Less than 2 ohms?
If yes: Go to Step 31.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 31. Multimeter (+) probe on J3, Pin 38.
Multimeter (−) probe on J3, Pin 42.
Between 15 and 25 ohms?
If yes: Go to Step 32.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 32. Multimeter (+) probe on P3, Socket 42.
Multimeter (−) probe on J5, Pin A.
Less than 2 ohms?
If yes: Replace Counter M12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 33. Any lamps on OCB come on?
If yes: Go to Step 34.
If no: Replace Switch S13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 34. Both MAGAZINE STATUS EMPTY lamps on OCB come on?
If yes: Go to Step 35.
If no: Go to Step 50.

Step 35. Any other indicator lamps on OCB come on?
If yes: Go to Step 36.
If no: Replace Switch S13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 36. ENGINE RUNNING lamp on OCB come on?
If yes: Go to Step 37.
If no: Go to STEP 48.

Step 37. SYSTEM MALFUNCTION lamp on OCB come on?
If yes: Go to Step 38.
If no: Go to STEP 46.

Step 38. LAUNCHER READY lamp on OCB come on?
If yes: Go to Step 39.
If no: Go to STEP 44.

Step 39. LEFT MAGAZINE VEHICLE SPEED TOO FAST lamp on OCB come on?
If yes: Go to STEP 40.
If no: Go to STEP 42.

STEP 40. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J3, Pin 12.
Multimeter (−) probe on J3, Pin 6.
Between 15 and 25 ohms?
If yes: Go to Step 41.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 41. Multimeter (+) probe on center terminal of Lamp DS7.
Multimeter (−) probe on P3, Socket 12.
Less than 2 ohms?
If yes: Replace Lamp DS7 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both parts of OCBT (Page 10-17).

STEP 42. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J3, Pin 14.
Multimeter (−) probe on J3, Pin 6.
Between 15 and 25 ohms?
If yes: Go to Step 43.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 43. Multimeter (+) probe on center terminal of Lamp DS6.
Multimeter (−) probe on P3, Socket 14.
Less than 2 ohms?
If yes: Replace Lamp DS6 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

STEP 44. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J3, Pin 16.
Multimeter (–) probe on J3, Pin 6.
Between 15 and 25 ohms?
If yes: Go to Step 45.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 45. Multimeter (+) probe on center terminal of Lamp DS5.
Multimeter (–) probe on P3, Socket 16.
Less than 2 ohms?
If yes: Replace Lamp DS5 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace diode board (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 46. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J3, Pin 18.
Multimeter (–) probe on J3, Pin 6.
Between 15 and 25 ohms?
If yes: Go to Step 47.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 47. Multimeter (+) probe on center terminal of Lamp DS4.
Multimeter (–) probe on P3, Socket 18.
Less than 2 ohms?
If yes: Replace Lamp DS4 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 48. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J5, Pin 15.
Multimeter (–) probe on J3, Pin 6.
Between 15 and 25 ohms?
If yes: Go to Step 49.
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 49. Multimeter (+) probe on center terminal of Lamp DS3.
Multimeter (–) probe on P3, Socket 15.
Less than 2 ohms?
If yes: Replace Lamp DS3 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 50. Either LEFT or RIGHT MAGAZINE STATUS EMPTY lamp on OCB come on?
If yes: Go to Step 51.
If no: Go to STEP 56.

Step 51. LEFT MAGAZINE STATUS EMPTY lamp on OCB come on?
If yes: Go to STEP 52.
If no: Go to STEP 54.

STEP 52. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 5.
Multimeter (−) probe on center terminal of Lamp DS2.
Less than 2 ohms?
If yes: Go to Step 53.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 53. Multimeter (+) probe on J3, Pin 13.
Multimeter (−) probe on J3, Pin 5.
Between 15 and 25 ohms?
If yes: Replace Lamp DS2 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 54. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 9.
Multimeter (−) probe on center terminal of Lamp DS1.
Less than 2 ohms?
If yes: Go to Step 55.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 55. Multimeter (+) probe on J3, Pin 13.
Multimeter (−) probe on J3, Pin 9.
Between 15 and 25 ohms?
If yes: Replace Lamp DS1 indicator light base (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 56. Disconnect 24 V dc power supply from J5.
Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on Switch S13, Terminal 1.
Multimeter (−) probe on Switch S13, Terminal 2.
Hold INDICATOR LIGHTS switch on OCB in TEST.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Switch S13 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

Step 57. OCB pass Step 1, Part I, of OCBT?
If yes: Go to Step 58.
If no: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 58. OCB pass Step 2, Part I, of OCBT?
If yes: Go to Step 59.
If no: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 59. OCB pass Step 2b, Part I, of OCBT?
If yes: Go to Step 60.
If no: Go to Step 107.

Step 60. OCB pass Step 3, Part I, of OCBT?
If yes: Go to Step 61.
If no: Go to Step 114.

Step 61. OCB pass Step 4a, Part I, of OCBT?
If yes: Go to Step 62.
If no: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 62. OCB pass Step 4b, Part I, of OCBT?
If yes: Go to Step 63.
If no: Go to Step 115.

Step 63. OCB pass Step 5, Part I, of OCBT?
If yes: Go to Step 64.
If no: Go to Step 96.

Step 64. OCB pass Step 6, Part I, of OCBT?
If yes: Go to Step 65.
If no: Go to STEP 99.

Step 65. OCB pass Step 7, Part I, of OCBT?
If yes: Go to Step 66.
If no: Go to Step 102.

Step 66. OCB pass Step 8, Part I, of OCBT?
If yes: Go to Step 67.
If no: Go to Step 93.

Step 67. OCB pass Step 9, Part I, of OCBT?
If yes: Go to Step 68.
If no: Go to Step 84.

Step 68. OCB pass Step 10, Part I, of OCBT?
If yes: Go to Step 69.
If no: Replace Switch S5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 69. OCB pass Substep 1 of Step 11, Part I, of OCBT?
If yes: Go to Step 70.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 70. OCB pass Substeps 2 thru 5 of Step 11, Part I, of OCBT?
If yes: Go to Step 71.
If no: Go to STEP 82.

Step 71. OCB pass Substeps 6 and 7 of Step 11, Part I, of OCBT?
If yes: Go to STEP 72.
If no: Go to STEP 78.

STEP 72. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on Switch S5, any Terminal 12 (common).
Multimeter (−) probe on P3, Socket 36.
Less than 2 ohms?
If yes: Go to Step 73.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 73. Hold LAUNCHER START switch on OCB in START.
Multimeter (+) probe on P3, Socket 30.
Multimeter (−) probe on Switch S11, Terminal 6.
Less than 2 ohms?
If yes: Replace Switch S11 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 74.

Step 74. Multimeter (+) probe on P3, Socket 30.
Multimeter (−) probe on Switch S8, Terminal 2.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 75.

Step 75 Multimeter (+) probe on P3, Socket 30.
Multimeter (−) probe on Switch S8, Terminal 3.
Less than 2 ohms?
If yes: Replace Switch S8 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 76.

Step 76. Multimeter (+) probe on P3, Socket 30.
Multimeter (−) probe on Switch S6, Terminal 1.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 77.

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

Step 77. Multimeter (+) probe on P3, Socket 30.
Multimeter (−) probe on Switch S6, Terminal 2.
Less than 2 ohms?
If yes: Replace Switch S6 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 78. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J5, Pin Z.
Multimeter (−) probe on J5, Pin H.
Less than 220 ohms?
If yes: Go to Step 79.
If no: Replace Switch S2 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 79. Less than 240 ohms?
If yes: Go to Step 80.
If no: Replace Switch S2 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 80. Multimeter (+) probe on J5, Pin Z.
Multimeter (−) probe on Switch S2, Terminal 5.
Less than 2 ohms?
If yes: Go to Step 81.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 81. Multimeter (+) probe on P3, Socket 32.
Multimeter (−) probe on Switch S2, Terminal 5.
Less than 2 ohms?
If yes: Replace diode board (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 82. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S2, Terminal 2.
Multimeter (−) probe on J5, Pin J.
Less than 2 ohms?
If yes: Go to Step 83.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 83. Multimeter (+) probe on Switch S2, Terminal 3.
Multimeter (−) probe on J5, Pin h.
Less than 2 ohms?
If yes: Replace Switch S2 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 84. Less than 1.5 ohms during any part of Step 9, Part I, of OCBT?
If yes: Go to Step 85.
If no: Go to Step 90.

Step 85. Hold JOG switch on OCB to LEFT.
Multimeter (+) probe on J5, Pin K.
Multimeter (–) probe on J5, Pin H.
Between 15 and 25 ohms?
If yes: Go to Step 86.
If no: Go to Step 88.

Step 86. Hold JOG switch on OCB to RIGHT.
Multimeter (+) probe on J5, Pin K.
Multimeter (–) probe on J5, Pin H.
Between 15 and 25 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 87.

STEP 87. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 41.
Multimeter (–) probe on Switch S4, Terminal 6.
Less than 2 ohms?
If yes: Replace Switch S4 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 88. Multimeter (+) probe on J5, Pin J.
Multimeter (–) probe on J5, Pin H.
Between 15 and 25 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to STEP 89.

STEP 89. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 27.
Multimeter (–) probe on Switch S4, Terminal 4.
Less than 2 ohms?
If yes: Replace Switch S4 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 90. PATTERN SELECTOR switch on OCB to 5.
Multimeter (+) probe on J5, Pin K.
Multimeter (–) probe on J5, Pin H.
Less than 2 ohms?
If yes: Go to STEP 91.
If no: Go to STEP 92.

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

STEP 91. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S5, any Terminal 12 (common).
Multimeter (−) probe on Switch S4, Terminal 5.
Less than 2 ohms?
If yes: Replace Switch S4 (Page 10-3).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 92. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S5, any Terminal 12 (common).
Multimeter (−) probe on Switch S11, Terminal 2.
Less than 2 ohms?
If yes: Replace Switch S5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 93. Between 15 and 25 ohms in any density setting of Step 8, Part I, of OCBT?
If yes: Go to STEP 94.
If no: Go to STEP 95.

STEP 94. Remove operator's control panel assembly from OCB (Page 10-17).

NOTE

Terminal 12 on Switch S10 is common (C).

Perform continuity check of Switch S10. (See following S10 and S12 Continuity Checklist.)

S10 AND S12 CONTINUITY CHECKLIST

Rear Level		Center Level		Front Level	
From	To	From	To	From	To
C	1	C	1	C	1
C	2	C	2	C	2
C	3	C	3	C	3
C	4	C	4	C	4
C	5	C	5	C	5
C	6	C	6	C	6
1	2	1	4	2	4
2	3	4	5	4	6
3	1	5	1	6	2

Switch S10 pass continuity check?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Switch S10 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 95. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on J3, Pin 34.
Multimeter (−) probe on Switch S8, Terminal 4.
Less than 2 ohms?
If yes: Replace Switch S8 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 96. OCB pass Step 6, Part I, of OCBT?
If yes: Go to STEP 97.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 97. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 11.
Multimeter (−) probe on Switch S7, Terminal 2.
Less than 2 ohms?
If yes: Go to Step 98.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 98. Connect P3 to J3.
Multimeter (+) probe on J5, Pin d.
Multimeter (−) probe on Switch S7, Terminal 1.
Less than 2 ohms?
If yes: Replace Switch S7 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 99. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 29.
Multimeter (−) probe on Switch S9, Terminal 2.
Less than 2 ohms?
If yes: Go to Step 100.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 100. Connect P3 to J3.
Multimeter (+) probe on J5, Pin W.
Multimeter (−) probe on Switch S9, Terminal 1.
Less than 2 ohms?
If yes: Go to Step 101.
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

Step 101. Multimeter (+) probe on J5, Pin V.
Multimeter (−) probe on Switch S9, Terminal 3.
Less than 2 ohms?
If yes: Replace Switch S9 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 102. Between 15 and 25 ohms in Step 7, Part I, of OCBT?
If yes: Go to STEP 103.
If no: Go to Step 104.

STEP 103. Remove operator's control panel assembly from OCB (Page 10-17).

NOTE

Terminal 12 on Switch S12 is common (C).

Perform continuity check of Switch S12. (See S10 and S12 Continuity Checklist, Page 2-140.)
Switch S12 pass continuity check?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no. Replace Switch S12 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 104. Multimeter (+) probe on J5, Pin W.
Multimeter (−) probe on J5, Pin a.
PATTERN SELECTOR switch on OCB to 4.
RIGHT MAGAZINE FIRE/OFF switch on OCB to FIRE.
RIGHT MAGAZINE DENSITY switch on OCB to 0.001.
Between 15 and 25 ohms?
If yes: Go to Step 105.
If no: Go to STEP 106.

Step 105. Multimeter (+) probe on J5, Pin E.
Multimeter (−) probe on J5, Pin H.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 106. Remove operator's control panel assembly from OCB (Page 10-17).
Disconnect P3 from J3.
Multimeter (+) probe on P3, Socket 31.
Multimeter (−) probe on Switch S11, Terminal 1.
Less than 2 ohms?
If yes: Replace Switch S11 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 107. OCB pass Step 3, Part I, of OCBT?
If yes: Go to STEP 108.
If no: Go to STEP 113.

STEP 108. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S1, Terminal 1.
Multimeter (−) probe on Switch S1, Terminal 7.
Hold ENGINE START/FUEL ON/OFF switch on OCB in START.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 109.

Step 109. Multimeter (+) probe on Switch S1, Terminal 2.
Multimeter (−) probe on Switch S1, Terminal 7.
ENGINE START/FUEL ON/OFF switch on OCB OFF.
Less than 2 ohms?
If yes: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 110.

Step 110. Multimeter (+) probe on Switch S3, Terminal 7.
Multimeter (−) probe on Switch S1, Terminal 7.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 111.

Step 111. Multimeter (+) probe on Switch S3, Terminal 8.
Multimeter (−) probe on Switch S1, Terminal 7.
Less than 2 ohms?
If yes: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 112.

Step 112. Multimeter (+) probe on Switch S3, Terminal 12.
Multimeter (−) probe on Switch S1, Terminal 7.
Less than 2 ohms?
If yes: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 113. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S1, Terminal 8.
Multimeter (−) probe on J5, Pin G.
Less than 2 ohms?
If yes: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

2-6.34 SWITCH OR LIGHT FAILS ON OPERATOR CONTROL BOX — Continued

Step 114. Perform Step 3, Part I, of OCBT (Page 10-17).
Hold ENGINE START/FUEL ON/OFF switch on OCB in START.
Less than 2 ohms?
If yes: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

Step 115. Multimeter (+) probe on J5, Pin F.
Multimeter (–) probe on J5, Pin H.
MODE SELECT switch on OCB to DISPENSE.
Less than 2 ohms?
If yes: Go to STEP 116.
If no: Go to STEP 117.

STEP 116. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S3, Terminal 5.
Multimeter (–) probe on Switch S3, Terminal 1.
MODE SELECT switch on OCB to LOAD/UNLOAD.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

STEP 117. Remove operator's control panel assembly from OCB (Page 10-17).
Multimeter (+) probe on Switch S5, Terminal 3.
Multimeter (–) probe on J5, Pin H.
Less than 2 ohms?
If yes: Replace Switch S3 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Go to Step 118.

Step 118. Multimeter (+) probe on Switch S1, Terminal 4.
Multimeter (–) probe on J5, Pin H.
Less than 2 ohms?
If yes: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Fage 10-17).
If no: Go to Step 119.

Step 119. Multimeter (+) probe on Switch S1, Terminal 5.
Multimeter (–) probe on J5, Pin H.
Less than 2 ohms?
If yes: Replace Switch S1 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).
If no: Replace Cable Assembly J5 (Page 10-17).
Check that OCB passes both Parts of OCBT (Page 10-17).

END OF TASK

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E./ALARM PANEL ASSEMBLY (Page 11-195)
CABLE ASSEMBLY P2, P80, AND J17A (Page 11-67)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CARD RACK ASSEMBLY (Page 11-103)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
CYLINDER HEAD ASSEMBLY (Page 15-219)
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
ENGINE REMOVAL AND INSTALLATION (Page 15-487)
FUEL INJECTION PUMP (Page 15-161)
HYDRAULIC RESERVOIR INSTALLATION (Page 9-213)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
LAUNCHER WHEEL BRAKE PROXIMITY SENSOR ASSEMBLY (Page 4-139)

References — Continued:
LEFT AND RIGHT TRANSMITTER ASSEMBLIES (Page 4-123)
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT JAMMED MINE OUTPUT SENSOR (Page 4-111)
LEFT MAGAZINE SENSORS (FUNCTIONAL DESCRIPTION) (Page 6-4)
LEFT MINE INPUT PROXIMITY SENSOR (Page 4-189)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
POWER PANEL ASSEMBLY (Page 11-111)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT JAMMED MINE OUTPUT SENSOR (Page 4-117)
RIGHT MAGAZINE SENSORS (FUNCTIONAL DESCRIPTION) (Page 7-4)
RIGHT MINE INPUT PROXIMITY SENSOR (Page 4-195)
TERMINAL PANEL ASSEMBLY (Page 11-49)
TRANSMITTER POWER SUPPLY (Page 4-133)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. ENGINE RUNNING lamp on operator control box (OCB) on?
If yes: Go to Step 2.
If no: Go to Step 73.

Step 2. ENGINE TEMP Lamp L29 on B.I.T.E./ALARM CONTROL PANEL (BACP) on?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 3.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

Step 3. ENGINE OIL Lamp L30 on BACP on?
    If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
        Check SYSTEM MALFUNCTION light does not come on during operation.
    If no: Go to Step 4.

Step 4. XMTR LEFT FAIL Lamp L31 and RIGHT FAIL Lamp L32 on BACP on?
    If yes: Go to STEP 5.
    If no: Go to Step 15.

STEP 5. Stop engine (TM 9-1095-205-20).
Disconnect P10 from J10.
Multimeter (+) probe on P10, Pin A.
Multimeter (−) probe on bare metal ground.
MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
More than 18 V dc?
    If yes: Replace transmitter power supply (Page 4-133).
        Check SYSTEM MALFUNCTION light does not come on during operation.
    If no: Go to Step 6.

Step 6. MASTER POWER switch on MCP off.
Connect P10 to J10.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
LAUNCHER START switch on OCB to START for 5 seconds.
LAUNCHER READY light on OCB come on?
    If yes: Go to STEP 7.
    If no: Go to STEP 11.

STEP 7. Remove cover from BACP (TM 9-1095-205-20).
DISPENSE MODE Lamp L56 on BACP on?
    If yes: Go to STEP 8.
    If no: Go to Step 10.

STEP 8. Stop engine (TM 9-1095-205-20).
Open BACP (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 77.
Multimeter (−) probe on bare metal ground.
MASTER POWER switch on MCP ON.
More than 18 V dc?
    If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
        Check SYSTEM MALFUNCTION light does not come on during operation.
    If no: Go to Step 9.

Step 9. MASTER POWER switch on MCP off.
Multimeter (+) probe on Relay K5, Terminal A2 (Page 11-111).
Multimeter (−) probe on bare metal ground.
MASTER POWER switch on MCP ON.
More than 18 V dc?
If yes: Replace wire between Relay K5, Terminal A2 and Terminal Board 1TB, Part 5, Terminal 77 (Page 11-111).
If no: Go to Step 113.

Step 10. D02 Lamp L39 on BACP on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation. If it does, old CCA4 is good.
Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).

STEP 11. Remove cover from BACP (TM 9-1095-205-20).
LCHR UP TO SP Lamp L69 on BACP on?
If yes: Go to Step 12.
If no: Go to Step 13.

Step 12. D01 Lamp L38 on BACP on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation. If it does, old CCA4 is good.
Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 13. Stop engine (TM 9-1095-205-20).
RUN/TEST Switch S1 on BACP to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to J.
Lift and hold LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
LCHR UP TO SP Lamp L69 on BACP on?
If yes: Go to STEP 14.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 14. Disconnect P38 from J38.
Multimeter (+) probe on P38, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace launcher wheel brake proximity sensor assembly (Page 4-139).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace launcher external wiring harness (TM 9-1095-205-20).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 15. XMTR RIGHT FAIL Lamp L32 on BACP on?
If yes: Go to STEP 16.
If no: Go to Step 19.

STEP 16. Stop engine (TM 9-1095-205-20).
Disconnect P10 from J10.
Multimeter (+) probe on P10, Socket D.
Multimeter (−) probe on bare metal ground.
Between 1500 and 2000 ohms?
If yes: Go to Step 17.
If no: Go to Step 18.

Step 17. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 4, Right Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace right transmitter assembly (Page 4-123).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 18. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 4, Right Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 19. XMTR LEFT FAIL Lamp L31 on BACP on?
If yes: Go to STEP 20.
If no: Go to Step 24.

STEP 20. Stop engine (TM 9-1095-205-20).
Disconnect P10 from J10.
Multimeter (+) probe on P10, Socket E.
Multimeter (−) probe on bare metal ground.
Between 1500 and 2000 ohms?
If yes: Go to Step 21.
If no: Go to Step 22.

Step 21. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 5, Left Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace left transmitter assembly (Page 4-123).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 22. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 5, Left Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 23.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 23. MASTER POWER switch on MCP off.
Open BACP (Page 11-195).
Multimeter (+) probe on Rotary Switch 14SW, Terminal A3-1 (Page 11-195).
Multimeter (−) probe on Terminal Board 1TB, Part 3, Terminal 53.
Less than 10 ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 24. TAB RIGHT FAIL Lamp L35 on BACP on?
If yes: Go to Step 25.
If no: Go to Step 42.

Step 25. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 7, RIGHT TAB Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 26.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 26. MASTER POWER switch on MCP off.
Move right magazine reel by hand until two tabs are equal distance from right tab proximity sensor, with no tab in front of sensor. Use manual crank.
RUN/TEST Switch S1 on BACP to TEST.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 26. — Continued

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-20).
MODE SELECT switch on OCB to LOAD/UNLOAD.
RIGHT MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press LOAD/UNLOAD MAGAZINE RIGHT Switch S27 on BACP.
RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81 on BACP come on?
If yes: Go to Step 27.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 27. Release LOAD/UNLOAD MAGAZINE RIGHT Switch S27 on BACP.
Press COUNT LOAD/UNLOAD MAGAZINE RIGHT Switch S31 on BACP.
RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81 on BACP go out?
If yes: Go to Step 28.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 28. Release COUNT LOAD/UNLOAD MAGAZINE RIGHT Switch S31 on BACP.
Press and release right input proximity sensor lever (Page 7-4).
RIGHT MAG LOAD/UNLOAD CCA10 RUN Lamp L81 on BACP come on?
If yes: Go to Step 29.
If no: Go to STEP 34.

Step 29. Press and hold LOAD/UNLOAD MAGAZINE RIGHT Switch S27 on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE RIGHT Switch S31 on BACP.
RIGHT MAG MINE COUNT UP Lamp L89 on BACP blink?
If yes: Go to STEP 30.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 30. Press and hold LOAD/UNLOAD MAGAZINE RIGHT Switch S27 on BACP.
Helper move right magazine reel by hand until one tab passes in front of right tab proximity sensor. Helper use manual crank.
RIGHT MAG MINE COUNT UP Lamp L89 on BACP blink?
If yes: Go to Step 31.
If no: Go to STEP 37.

Step 31. Helper move right magazine reel by hand until two tabs are equal distance from right tab proximity sensor, with no tab in front of sensor. Helper use manual crank.
Press and release LOAD ADVANCE/UNLOAD MAGAZINE RIGHT Switch S29 on BACP.
RIGHT MAG LOAD/UNLOAD CCA10 Lamp L81 on BACP come on?
If yes: Go to Step 32.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 32. Press and hold MAG FULL/DISP COUNT DWN MAGAZINE RIGHT Switch S33 on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE RIGHT Switch S31 on BACP.
RIGHT MAG LOAD/UNLOAD CCA10 Lamp L81 on BACP go out?
If yes: Go to STEP 33.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 33. Release MAG FULL/DISP COUNT DWN MAGAZINE RIGHT Switch S33 on BACP.
Disconnect P28 from J28.
Multimeter (+) probe on P28, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace right output proximity sensor (Page 3-15).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 40.

STEP 34. Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 58.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 35.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 35. Disconnect P18 from J18.
Multimeter (+) probe on J18, Socket S.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 36.
If no: Replace Connector Assembly J18 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 36. Connect P18 to J18.
Disconnect P22 from J22.
Multimeter (+) probe on J22, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace right input proximity sensor (Page 7-21).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Refer to higher level maintenance.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 37. Remove Junction Box JB3 cover (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 63.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 38.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 38. Disconnect P18 from J18.
Multimeter (+) probe on J18, Socket K.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 39.
If no: Replace Connector Assembly J18 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 39. Connect P18 to J18.
Disconnect P26 from J26.
Multimeter (+) probe on P26, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace right tab proximity sensor (Page 7-21).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Refer to higher level maintenance.

STEP 40. Connect P28 to J28.
Disconnect P18 from J18.
Multimeter (+) probe on J18, Socket j.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 41.

STEP 41. Connect P18 to J18.
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 64.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J18 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 42. TAB LEFT FAIL Lamp L34 on BACP on?
If yes: Go to Step 43.
If no: Go to Step 60.

Step 43. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 6, LEFT TAB Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 44.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 44. MASTER POWER switch on MCP off.
Move left magazine reel by hand until two tabs are equal distance from left tab proximity sensor, with no tab in front of sensor. Use manual crank.
RUN/TEST Switch S1 on BACP to TEST.

NOTE

With RUN/TEST SWITCH in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E system. Indicators will function as if engine and dispenser were operating.

Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT MAGAZINE LOAD/OFF/UNLOAD switch on OCB to LOAD.
Press LOAD/UNLOAD MAGAZINE LEFT Switch S26 on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 on BACP come on?
If yes: Go to Step 45.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 45. Release LOAD/UNLOAD MAGAZINE LEFT Switch S26 on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE LEFT Switch S30 on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 on BACP go out?
If yes: Go to Step 46.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 46. Press and release left input proximity sensor (Page 6-4).
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 on BACP come on?
If yes: Go to Step 47.
If no: Go to STEP 54.

Step 47. Press and hold LOAD/UNLOAD MAGAZINE LEFT Switch S26 on BACP.
Press and release COUNT LOAD/UNLOAD MAGAZINE LEFT Switch S30 on BACP.
LEFT MAG MINE COUNT UP Lamp L85 on BACP blink?
If yes: Go to Step 48.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

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2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

Step 48. Press and hold LOAD/UNLOAD MAGAZINE LEFT Switch S26 on BACP.
Helper move left magazine reel by hand until one tab passes in front of left tab proximity sensor. Helper use manual crank.
LEFT MAG MINE COUNT UP Lamp L85 on BACP blink?
If yes: Go to Step 49.
If no: Go to STEP 57.

Step 49. Release LOAD/UNLOAD MAGAZINE LEFT Switch S26 on BACP.
Helper move left magazine reel by hand until two tabs are equal distance from left tab proximity sensor, with no tab in front of sensor. Helper use manual crank.
Press and release LOAD ADVANCE/UNLOAD MAGAZINE LEFT Switch S28 on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 on BACP come on?
If yes: Go to Step 50.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 50. Press and release MAG FULL/DISP COUNT DWN MAGAZINE LEFT Switch S32 on BACP.
LEFT MAG LOAD/UNLOAD CCA9 RUN Lamp L73 on BACP go out?
If yes: Go to STEP 51.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 51. Disconnect P27 from J27.
Multimeter (+) probe on P27, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left output proximity sensor (Page 3-15).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 52.

STEP 52. Connect P27 to J27.
Disconnect P15 from J15.
Multimeter (+) probe on J15, Socket Y.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 53.

STEP 53. Connect P15 to J15.
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 65.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J15 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 54. Disconnect P21 from J21.
Multimeter (+) probe on P21, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left input proximity sensor (Page 6-37).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 55.

STEP 55. Connect P21 to J21.
Disconnect P15 from J15.
Multimeter (+) probe on J15, Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 56.

STEP 56. Connect P15 to J15.
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 61.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J15 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 57. Disconnect P25 from J25.
Multimeter (+) probe on P25, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left tab proximity sensor (Page 6-37).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 58.

STEP 58. Connect P25 to J25.
Disconnect P15 from J15.
Multimeter (+) probe on J15, Socket J.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Refer to higher level maintenance.
If no: Go to STEP 59.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 59. Connect P15 to J15.
Remove cover from Junction Box JB3 (Page 6-7).
Multimeter (+) probe on Terminal Board 3TB, Terminal 60.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J15 (Page 6-7).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 60. JAMMED MINE LAUNCHER BRAKE SOL Lamp L36 on BACP on?
If yes: Go to Step 61.
If no: Go to Step 68.

Step 61. JAMMED MINE LAUNCHER WH POWER Lamp L37 on BACP on?
If yes: Go to Step 62.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 62. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 16, Left (LT) JAMMED MINE Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to Step 63.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 63. Perform LAUNCHER WHEEL BRAKE SYSTEM READINESS TEST (TM 9-1095-205-10).
Left side pass test?
If yes: Go to STEP 64.
If no: Go to STEP 69.

STEP 64. Open BACP (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 104.
Multimeter (−) probe on bare metal ground.
More than 1 V dc?
If yes: Replace right jammed mine output sensor (Page 4-117).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 65.

Step 65. Helper move and hold right mine output probe in front of right jammed mine output sensor (Page 4-117).
More than 9 V dc?
If yes: Go to STEP 66.
If no: Go to STEP 67.

STEP 66. Disconnect P52 from J52.
Multimeter (+) probe on P52, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace right mine input proximity sensor (Page 4-195).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace launcher hookup cable assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 67. Disconnect P54 from J54.
Multimeter (+) probe on J54, Socket F.
Multimeter (−) probe on bare metal ground.
Less than 11,000 ohms?
If yes: Replace right jammed mine output sensor (Page 4-117).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 68. JAMMED MINE LAUNCHER WH POWER Lamp L37 on BACP on?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 69. Open BACP (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 103.
Multimeter (−) probe on bare metal ground.
More than 1 V dc?
If yes: Replace left jammed mine output sensor (Page 4-111).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 70.

Step 70. Helper move and hold left mine output probe in front of left jammed mine output sensor (Page 4-111).
More than 9 V dc?
If yes: Go to STEP 71.
If no: Go to STEP 72.

STEP 71. Disconnect P51 from J51.
Multimeter (+) probe on P51, Socket F.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left mine input proximity sensor (Page 4-189).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 72. Disconnect P55 from J55.
Multimeter (+) probe on P55, Socket F.
Multimeter (−) probe on bare metal ground.
Less than 11,000 ohms?
If yes: Replace left jammed mine output sensor (Page 4-111).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 73. ENGINE TEMP Lamp L29 on BACP on?
If yes: Go to Step 74.
If no: Go to Step 94.

Step 74. COOLANT TEMP indicator on MCP read higher than 240 degrees?
If yes: Go to STEP 75.
If no: Go to Step 88.

STEP 75. Open engine hinged panel (TM 9-1095-205-10).
Engine hot to touch?
If yes: Go to STEP 76.
If no: Go to Step 80.

STEP 76. MASTER POWER switch on MCP off.
Disconnect P35 from J35.
Multimeter (+) probe on J35, Pin E.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Go to Step 77.
If no: Go to Step 84.

Step 77. Connect P35 to J35.
Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 2, ENGINE TEMP Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 78.
If no: Go to STEP 86.

STEP 78. Open BACP (Page 11-5).
Disconnect P80 from J80.
Remove two Leads No. 11 from Terminal Board 1TB, Part 1, Terminal 11 (Page 11-49).
Multimeter (+) probe on J80, Pin L.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 79.

Step 79. Multimeter (+) probe on P80, Socket L.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly P35 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 80. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 2, ENGINE TEMP Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 81.
If no: Go to STEP 83.

STEP 81. MASTER POWER switch on MCP off.
Open BACP (Page 11-5).
Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin L.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 82.

STEP 82. Remove two Leads No. 11 from Terminal Board 1TB, Part 1, Terminal 11 (Page 11-49)
Multimeter (+) probe on J80, Socket L.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly P35 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 83. Remove Circuit Card Assembly CCA2 from dispenser (Page 11-265).
Install new Circuit Card Assembly CCA2 on dispenser (Page 11-265).
SYSTEM MALFUNCTION LIGHT on OCB lit?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Check SYSTEM MALFUNCTION light does not come on during operation.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

Step 84. Check fuel injection pump timing (Page 15-161).
Pump timed correctly?
If yes: Go to STEP 85.
If no: Time fuel injection pump (Page 15-161).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 85. Remove cylinder head from engine (Page 15-219).
Inspect cylinders for evidence of coolant.
Evidence of coolant?
If yes: Replace cylinder head gasket (Page 15-219).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace engine (Page 15-487).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 86. Remove Circuit Card Assembly CCA2 from dispenser (Page 11-265).
Install new Circuit Card Assembly CCA2 on dispenser (Page 11-265).
SYSTEM MALFUNCTION LIGHT on OCB lit?
If yes: Go to STEP 87.
If no: Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 87. MASTER POWER switch on MCP off.
Disconnect P2 from J2.
Multimeter (+) probe on P2, Pin K6.
Multimeter (−) probe on Rotary Switch 14SW, Terminal D2 (Page 11-195).
Less than 10 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 88. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 2, ENGINE TEMP Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 89.
If no: Go to STEP 91.

STEP 89. MASTER POWER switch on MCP off.
Multimeter (+) probe on Rotary Switch 14SW, Terminal D2-1 (Page 11-195).
Multimeter (−) probe on Terminal Board 1TB, Part 1, Terminal 11.
Less than 10 ohms?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 90.

STEP 90. Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin L.
Multimeter (−) probe on Terminal Board 1TB, Part 1, Terminal 11.
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly J80 (Page 11-5).

STEP 91. MASTER POWER switch on MCP off.
Remove Circuit Card Assembly CCA2 from dispenser (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.
Install new Circuit Card Assembly CCA2 on dispenser (Page 11-265).
SYSTEM MALFUNCTION LIGHT on OCB lit?
If yes: Go to STEP 92.
If no: Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 92. MASTER POWER switch on MCP off.
Disconnect P2 from J2.
Multimeter (+) probe on P2, Pin K6.
Multimeter (−) probe on Rotary Switch 14SW, Terminal D2-1 (Page 11-195).
Less than 10 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 93.

Step 93. Multimeter (+) probe on Rotary Switch 14SW, Terminal D2 (Page 11-195).
Multimeter (−) probe on Rotary Switch 14SW, Terminal D2-1 (Page 11-195).
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Rotary Switch 14SW (Page 11-195).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 94. ENGINE OIL Lamp L30 on BACP come on?
If yes: Go to STEP 95.
If no: Go to Step 105.

STEP 95. Remove Lead 20 from engine oil pressure switch (3LS) (TM 9-1095-205-20).
Ground Lead 20.
Start engine (TM 9-1095-205-10).
Engine start?
If yes: Replace engine cylinder head gasket (Page 15-219).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 96.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

Step 96. Install Lead 20 on engine oil pressure switch (3LS) (TM 9-1095-205-20).
Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 3, ENGINE OIL Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 97.
If no: Go to STEP 102.

STEP 97. Multimeter (+) probe on Rotary Switch 14SW, Terminal A1-1 (Page 11-195).
Multimeter (–) probe on Terminal Board 1TB, Part 1, Terminal 20.
Less than 10 ohms?
If yes: Replace Cable Assembly P35 (Page 16-3).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 98.

STEP 98. Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin F.
Multimeter (–) probe on Terminal Board 1TB, Part 1, Terminal 20.
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 99.

Step 99. Multimeter (+) probe on Terminal Board 1TB, Part 5, Terminal 87.
Multimeter (–) probe on Terminal Board 1TB, Part 1, Terminal 20.
Less than 10 ohms?
If yes: Replace Cable Assembly J80 (Page 11-5).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 100.

Step 100. Multimeter (+) probe on Relay K3, Terminal B3.
Multimeter (–) probe on Terminal Board 1TB, Part 1, Terminal 20.
Less than 10 ohms?
If yes: Replace wire between Terminal Board 1TB, Part 1, Terminal 87 and Relay K3, Terminal B3 (Page 11-111).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 101.

Step 101. Multimeter (+) probe on Relay K3, Terminal B2.
Multimeter (–) probe on Terminal Board 1TB, Part 1, Terminal 20.
Less than 10 ohms?
If yes: Replace Relay K3 (Page 11-111).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace wire between Terminal Board 1TB, Part 1, Terminal 20 and Relay K3, Terminal B2 (Page 11-111).
Check SYSTEM MALFUNCTION light does not come on during operation.

STEP 102. Remove Circuit Card Assembly CCA2 from dispenser (Page 11-265).
Install new Circuit Card Assembly CCA2 on dispenser (Page 11-265).
Perform BACPCP, Item 3, ENGINE OIL Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 103.

STEP 103. Disconnect P2 from J2.
Multimeter (+) probe on J2, Socket C2.
Multimeter (−) probe on Rotary Switch 14SW, Terminal A1-1 (Page 11-195).
Less than 10 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 104.

Step 104. Multimeter (+) probe on J2, Socket C3.
Multimeter (−) probe on Rotary Switch 14SW, Terminal A1 (Page 11-195).
Less than 10 ohms?
If yes: Replace Rotary Switch 14SW (Page 11-195).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 105. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 10, CONTROL LOGIC and Hydraulic (HYD) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Go to STEP 106.
If no: Go to Step 109.

STEP 106. Multimeter (+) probe on Rotary Switch 14SW, Terminal D1-1 (Page 11-195).
Multimeter (−) probe on Terminal Board 1TB, Part 5, Terminal 55.
Less than 10 ohms?
If yes: Go to STEP 107.
If no: Go to STEP 108.

STEP 107. Disconnect P36 from J36.
Multimeter (+) probe on J36, Socket B.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Refer to higher level maintenance.
If no: Replace hydraulic reservoir level sensor (Page 9-213).
Check SYSTEM MALFUNCTION light does not come on during operation.

2-6.35 SYSTEM MALFUNCTION LIGHT IS LIT — Continued

STEP 108. Disconnect P80 from J80.
Multimeter (+) probe on J80, Pin K.
Multimeter (−) probe on Terminal Board 1TB, Part 5, Terminal 55.
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Cable Assembly J80 (Page 11-5).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 109. HYD TANK LEVEL Lamp L57 on BACP come on when HYD FAIL Switch S18 on BACP was moved to right?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 110.

STEP 110. Remove Circuit Card Assembly CCA2 from dispenser (Page 11-265).
Install new Circuit Card Assembly CCA2 on dispenser (Page 11-265).
Perform BACPCP, Item 10, CONTROL LOGIC and Hydraulic (HYD) Circuits (TM 9-1095-205-20).
HYD TANK LEVEL Lamp L57 on BACP come on when HYD FAIL Switch S18 on BACP was moved to right?
If yes: Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to STEP 111.

STEP 111. Disconnect P2 from J2.
Multimeter (+) probe on P2, Pin P13.
Multimeter (−) probe on Rotary Switch 14SW, Terminal D1-1 (Page 11-195)
Less than 10 ohms?
If yes: Replace card rack assembly (Page 11-103).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Go to Step 112.

Step 112. Multimeter (+) probe on Rotary Switch 14SW, Terminal D1 (Page 11-195).
Multimeter (−) probe on Rotary Switch 14SW, Terminal D1-1 (Page 11-195).
Less than 10 ohms?
If yes: Replace Cable Assembly P2, P80, and J17A (Page 11-67).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace Rotary Switch 14SW (Page 11-195).
Check SYSTEM MALFUNCTION light does not come on during operation.

Step 113. Multimeter (+) probe on Relay K5, Terminal A1 (Page 11-111).
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Relay K5 (Page 11-111).
Check SYSTEM MALFUNCTION light does not come on during operation.
If no: Replace lead between Relay K5, Terminal A1 and Terminal Board 1TB, Part 6, Terminal 106 (Page 11-111).
Check SYSTEM MALFUNCTION light does not come on during operation.

END OF TASK

2-6.36 OPERATOR'S TEST OF INDICATOR LIGHTS FAILS

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnal Required:
Electrical repairer

References:
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
Disconnect J4 from P4.
Multimeter (+) probe on J4, Socket G.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Go to STEP 2.
If no: Go to Step 3.

STEP 2. Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
Multimeter (+) probe on first Terminal 2 from left on Terminal Board 1TB, Part 3.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check operator's test of indicator lights does not fail.
If no: Replace Lead 2 between first Terminal 2 from left on Terminal Board 1TB, Part 3, and second shield wire terminal from left end of Terminal Board 1TB, Part 3.
Check operator's test of indicator lights does not fail.

Step 3. Multimeter (+) probe on J4, Socket M.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Go to STEP 4.
If no: Go to STEP 5.

STEP 4. Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
Multimeter (+) probe on first Terminal 2 from left end on Terminal Board 1TB, Part 3.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check operator's test of indicator lights does not fail.
If no: Replace Lead 2 between first Terminal 2 from left on Terminal Board 1TB, Part 3, and second shield wire terminal from left end of Terminal Board 1TB, Part 3.
Check operator's test of indicator lights does not fail.

STEP 5. Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 6.
Multimeter (−) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check operator's test of indicator lights does not fail.
If no: Replace Lead between Circuit Breaker 1CB and Terminal Board 1TB, Part 1, Terminal 6 (Page 11-49).
Check operator's test of indicator lights does not fail.

END OF TASK

2-6.37 OPERATOR'S B.I.T.E./ALARM CONTROL PANEL LIGHT TEST FAILS

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-20
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
POWER PANEL ASSEMBLY (Page 11-111)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. MASTER POWER switch on MAIN CONTROL PANEL ON.
Turn on following switches on B.I.T.E./ALARM CONTROL PANEL (BACP):
MAIN POWER Circuit Breaker S2.
ELEC POWER Cicruit Breaker S3.
GAUGES Circuit Breaker S4.
SENSOR/VALVES Circuit Breaker S5.
LAMP TEST Switch S10.
Lamps on BACP come on?
If yes: Go to Step 2.
If no: Go to STEP 7.

Step 2. Remove cover from BACP (TM 9-1095-205-20).
ENGINE FUEL ON Lamp L50 and ENGINE START Lamp L51 come on?
If yes: Go to Step 3.
If no: Replace SW17 (Page 11-195).
Check BACP passes light test.

Step 3. Other lamps lit?
If yes: Replace Diode Board (Page 11-195).
Check BACP passes light test.
If no: Go to STEP 4.

STEP 4. Open BACP (Page 11-195).
Multimeter (+) probe on Terminal Board 1TB, Terminal 107.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 5.
If no: Go to Step 6.

Step 5. Multimeter (+) probe on SW17, Terminal 2.
Multimeter (–) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Toggle Switch SW17 (Page 11-195).
Check BACP passes light test.
If no: Replace Lead 2 between Terminal Board 1TB, Part 4, Terminal 2 and power panel ground bus (Page 11-111).
Check BACP passes light test.

Step 6. Multimeter (+) probe on Lead 107 at Resistor R3.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Lead 107 between Terminal Board 1TB, Terminal 107, and Resistor R3 (Page 11-195).
Check BACP passes light test.
If no: Replace Lead 17 between Terminal Board 1TB, Part 1, Terminal 17, and Resistor R2/3 (Page 11-195).
Check BACP passes light test.

STEP 7. Open BACP (Page 11-5).
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 17.
Multimeter (–) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Toggle Switch SW17 (Page 11-195).
Check BACP passes light test.
If no: Go to Step 8.

Step 8. Multimeter (+) probe on Leads 16 at Diode D2.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Power Module PS1 (Page 11-111).
Check BACP passes light test.
If no: Go to Step 9.

Step 9. Multimeter (+) probe on Lead 15 at Diode D2.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Diode D2 (Page 11-111).
Check BACP passes light test.
If no: Go to Step 10.

Step 10. Multimeter (+) probe on Teminal Board 1TB, Part 5, Terminal 15.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Lead 15 between Terminal Board 1TB, Part 5, Terminal 15 and Diode D2 (Page 11-195).
Check BACP passes light test.
If no: Go to Step 11.

2-6.37 OPERATOR'S B.I.T.E./ALARM CONTROL PANEL LIGHT TEST FAILS — Continued

Step 11. Multimeter (+) probe on Lead 15 at Circuit Breaker 2CB.
Multimeter (–) probe on bare metal ground.
More than 18 V dc?
If yes: Replace Lead 15 between Terminal Board 1TB, Part 5, Terminal 15 and Circuit Breaker 2CB (Page 11-195).
Check BACP passes light test.
If no: Replace Circuit Breaker 2CB (Page 11-195).
Check BACP passes light test.

END OF TASK

2-6.38 HYD FAIL LIGHT L33 IS LIT

INITIAL SETUP

References:
TM 9-1095-205-10
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

Personnel Required:
Electrical repairer

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Remove cover from B.I.T.E./ALARM CONTROL PANEL (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10.)
HYD FAIL Lamp L63 go out when HYD FAIL Lamp L33 comes on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check that HYD FAIL Light L33 is not lit.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check that HYD FAIL Light L33 is not lit.

END OF TASK

2-6.39 ENG TEMP LIGHT L29 IS LIT

INITIAL SETUP

References:
TM 9-1095-205-10
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

Personnel Required:
Electrical repairer

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Remove cover from B.I.T.E./ALARM CONTROL PANEL (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
ENGINE TEMP Lamp L59 come on when ENGINE TEMP Lamp L29 lit?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check that ENGINE TEMP Light L29 is not lit.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check that ENGINE TEMP Light L29 is not lit.

END OF TASK

2-6.40 ENG OIL LIGHT L30 IS LIT WHILE ENGINE CRANKS OR RUNS

INITIAL SETUP

References:
TM 9-1095-205-10
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

Personnel Required:
Electrical repairer

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Open B.I.T.E./ALARM CONTROL PANEL (BACP) cover (TM 9-1095-205-20).
Start engine (TM 9-1095-205-10).
LAUNCHER RUN Lamp L53 on BACP come on when ENGINE OIL Lamp L30 on BACP comes on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check that ENGINE OIL lamp does not come on.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check that ENGINE OIL lamp does not come on.

END OF TASK

2-6.41 XMTR FAIL LIGHT (LEFT [L31], RIGHT [L32], OR BOTH) IS LIT

INITIAL SETUP

References:
TM 9-1095-205-20
CIRCUIT CARD ASSEMBLIES (Page 11-265)

Personnel Required:
Electrical repairer

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. XMTR LEFT FAIL Lamp L31 and XMTR RIGHT FAIL Lamp L32 on B.I.T.E./ALARM CONTROL PANEL (BACP) both lit?
If yes: Go to STEP 2.
If no: Go to STEP 3.

STEP 2. Stop engine (TM 9-1095-205-20).
Remove BACP cover from BACP (TM 9-1095-205-20).
TAPS FAIL Lamp L68 on BACP lit?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check that XMTR FAIL lights do not come on.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check that XMTR FAIL lights do not come on.

STEP 3. Stop engine (TM 9-109502-205-20).
XMTR LEFT FAIL Lamp L70 or XMTR RIGHT FAIL Lamp L71 on BACP off?
If yes: Go to Step 4.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check that XMTR FAIL lights do not come on.

Step 4. TAPS FAIL Lamp L68 on BACP lit?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check that XMTR FAIL lights do not come on.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check that XMTR FAIL lights do not come on.

END OF TASK

2-6.42 SELF DESTRUCT TIME: LONG IS NOT SELECTABLE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-8262
Circuit card extender 4 1/2 x 9 1/4 in.
(11.4 x 23.5 cm) 70 Pin

Personnel Required:
Electrical repairer
Helper

References:
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CARD RACK ASSEMBLY (Page 11-103)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. RUN/TEST Switch S1 on B.I.T.E./ALARM CONTROL PANEL (BACP) to TEST.
Remove Circuit Card Assembly CCA1 from card rack assembly (Page 11-265).
Install circuit card extender in card rack assembly.
Multimeter (+) probe on 1TB, Part 1, Terminal 28.
Multimeter (−) probe on Extender Socket 49.
Less than 10 ohms?
If yes: Go to STEP 2.
If no: Go to STEP 4.

STEP 2. Remove circuit card extender from card rack assembly.
Install Circuit Card Assembly CCA1 in card rack assembly (Page 11-265).
Disconnect P4 from J4.
Ground 1TB, Part 1, Terminal 28.
Multimeter (+) probe on J4, Socket Z.
Multimeter (−) probe on bare metal ground.
Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check that SELF DESTRUCT TIME: LONG is selectable.
If no: Go to STEP 3.

STEP 3. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on 4TB, Terminal 28.
Multimeter (−) probe on J4, Socket Z.
Less than 10 ohms?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check that SELF DESTRUCT TIME: LONG is selectable.
If no: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check that SELF DESTRUCT TIME: LONG is selectable.

2-6.42 SELF DESTRUCT TIME: LONG IS NOT SELECTABLE — Continued

STEP 4. Remove circuit card extender from card rack assembly.
Install Circuit Card Assembly CCA1 in card rack assembly (Page 11-265).
Disconnect P1 from J1.
Multimeter (+) probe on 1TB, Part 1, Terminal 28.
Multimeter (−) probe on P1, Socket S9.
Less than 10 ohms?
If yes: Replace Card Rack Assembly (Page 11-103).
Check that SELF DESTRUCT TIME: LONG is selectable.
If no: Replace Cable Assembly P1 (Page 11-49).
Check that SELF DESTRUCT TIME: LONG is selectable.

END OF TASK

2-6.43 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
HYDRAULIC RESERVOIR INSTALLATION (Page 9-213)
JUNCTION BOX JB3 ASSEMBLY (Page 6-7)
LAUNCHER WHEEL BRAKE PROXIMITY SENSOR ASSEMBLY (Page 4-139)
LEFT INFEED CONVEYOR AND LEFT END COVER ASSEMBLIES (Page 6-21)
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)

References — Continued:
LEFT MINE INPUT PROXIMITY SENSOR (Page 4-189)
OSCILLATOR HYDRAULIC INSTALLATION (Page 9-47)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
PIN ASSEMBLY PROXIMITY SENSOR (Page 4-199)
POWER PANEL ASSEMBLY (Page 11-111)
RIGHT INFEED CONVEYOR AND RIGHT END COVER ASSEMBLIES (Page 7-7)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MINE INPUT PROXIMITY SENSOR (Page 4-195)
SOLENOID VALVE ASSEMBLY (Page 4-91)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Step 1. Circuit Breaker S3 tripped?
If yes: Go to STEP 2.
If no: Go to Step 5.

STEP 2. Disconnect Connector P57 from Power Module PS2 Receptacle J57 (Page 11-111).
Circuit Breaker S3 on.
Circuit Breaker S3 trip?
If yes: Go to STEP 3.
If no: Replace Power Module PS2 (Page 11-111).
Check circuit breaker does not keep tripping.

STEP 3. Connect Connector P57 to Power Module PS2 Receptacle J57 (Page 11-111)
Disconnect P36 from J36.
Circuit Breaker S3 on.
Circuit Breaker S3 trip?
If yes: Go to STEP 4.
If no: Replace Power Module PS1 (Page 11-111).
Check circuit breaker does not keep tripping.

2-6.43 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING — Continued

STEP 4. Connect P36 to J36.
Disconnect four Leads 16 from Diode D2 (Page 11-111).
Multimeter (+) probe on two Leads 16 which terminate at P36 Sockets A and B.
Multimeter (−) probe on bare metal ground.
Less than 1 ohm?
If yes: Replace two Leads 16.
Check circuit breaker does not keep tripping.
If no: Go to Step 8.

Step 5. Circuit Breaker S4 tripped?
If yes: Go to STEP 6.
If no: Go to Step 9.

STEP 6. Disconnect Lead 7 that terminates at Connector P35 in MAIN CONTROL PANEL (MCP) from Terminal Board 1TB, Part 1, Terminal 7 (Page 11-49).
Circuit Breaker S4 on.
Circuit Breaker S4 trip?
If yes: Go to STEP 7.
If no: Replace Main Control Panel Cable Assembly P35 (Page 16-3).
Check circuit breaker does not keep tripping.

STEP 7. Connect Lead 7 that terminates at Connector P35 in MCP to Terminal Board 1TB, Part 1, Terminal 7 (Page 11-49).
Disconnect Lead 7 from Circuit Breaker 3CB (Page 11-195).
Circuit Breaker S4 on.
Circuit Breaker S4 trip?
If yes: Replace Circuit Breaker 3CB (Page 11-195).
Check circuit breaker does not keep tripping.
If no: Replace Lead 7 which terminates at Circuit Breaker 3CB (Page 11-195).
Check circuit breaker does not keep tripping.

Step 8. Multimeter (+) probe on two Leads 16 which run from Power Module PS2 to Diode D2 and from Resistor R1 to Diode 2.
Multimeter (−) probe on bare metal ground.
Less than 1 ohm?
If yes: Replace two Leads 16 which run from Power Module PS2 to Diode D2 and from Resistor R1 to Diode D2 (Page 11-111).
Check circuit breaker does not keep tripping.
If no: Go to STEP 13.

Step 9. SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 lit?
If yes: Go to STEP 10.
If no: Replace Circuit Breaker 4CB (Page 11-195).
Check circuit breaker does not keep tripping.

STEP 10. Disconnect P9 from J9.
SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 11.
If no: Go to STEP 14.

STEP 11. Connect P9 to J9.
Disconnect P49 from J49.
SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 12.
If no: Go to STEP 40.

STEP 12. Connect P49 to J49.
Disconnect P38 from J38.
SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace launcher wheel brake proximity sensor assembly (Page 4-139).
Check circuit breaker does not keep tripping.
If no: Go to STEP 41.

STEP 13. Connect four Leads 16 to Diode D2 (Page 11-111).
Disconnect two Leads 15 from Terminal Board 1TB, Part 5, Terminal 15 (Page 11-49).
Multimeter (+) probe on one Lead 15 which terminates at Circuit Breaker 2CB.
Multimeter (−) probe on bare metal ground.
Less than 1 ohm?
If yes: Replace one Lead 15 which terminates at Circuit Breaker 2CB (Page 11-195).
Check circuit breaker does not keep tripping.
If no: Go to Step 15.

STEP 14. Connect P9 to J9.
Disconnect Lead 54 (which runs from Terminal Board 1TB, Part 4, Terminal 54, to Terminal Board 1TB, Part 6, Terminal 54) from Terminal Board 1TB, Part 6, Terminal 54 (Page 11-49).
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Go to STEP 17.

Step 15. Multimeter (+) probe on other Lead 15, disconnected from Terminal Board 1TB, Part 5, Terminal 15.
Multimeter (−) probe on bare metal ground.
Less than 1 ohm?
If yes: Go to STEP 16.
If no: Replace Circuit Breaker 2CB (Page 11-195).
Check circuit breaker does not keep tripping.

STEP 16. Disconnect Lead 15 from Diode D2 (Page 11-111).
Less than 1 ohm?
If yes: Replace Lead 15 between Diode D2 and Terminal Board 1TB, Part 5, Terminal 15 (Page 11-111).
Check circuit breaker does not keep tripping.
If no: Replace Diode D2 (Page 11-111).
Check circuit breaker does not keep tripping.

2-6.43 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING — Continued

STEP 17. Connect Lead 54 (which runs from Terminal Board 1TB, Part 4, Terminal 54, to Terminal Board 1TB, Part 6, Terminal 54) to Terminal Board 1TB, Part 6, Terminal 54. Disconnect the same lead from Terminal Board 1TB, Part 4, Terminal 54 (Page 16-3).
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace Lead 54 between Terminal Board 1TB, Part 4, Terminal 54, and Terminal Board 1TB, Part 6, Terminal 54 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Go to STEP 18.

STEP 18. Connect Lead 54 to Terminal Board 1TB, Part 4, Terminal 54 (Page 16-3).
Disconnect Lead 54 (which runs from Terminal Board 1TB, Part 4, Terminal 54, to Relay K5, Terminals X2) from Terminal Board 1TB, Part 4, Terminal 54 (Page 16-3).
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 19.
If no: Go to STEP 23.

STEP 19. Remove cover from Junction Box JB3 (Page 6-7).
Disconnect two Leads 54 (which run from Terminal Board 1TB, Part 4, Terminals 54, to Terminal Board 3TB, Terminals 54) from Terminal Board 3TB, Terminal 54 (Page 6-7).
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 20.
If no: Go to STEP 26.

STEP 20. Connect two Leads 54 to Terminal Board 3TB, Terminals 54 (Page 6-7).
Disconnect P15 from J15.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 21.
If no: Go to STEP 27.

STEP 21. Connect P15 to J15.
Disconnect P47 from J47.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 22.
If no: Go to STEP 28.

STEP 22. Remove left infeed conveyor assembly (Page 6-21).
Disconnect P21 from J21.
Install left infeed conveyor assembly (Page 6-21).
Connect P47 to J47.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace left infeed proximity sensor (Page 6-37).
Check circuit breaker does not keep tripping.
If no: Go to STEP 29.

STEP 23. Connect Lead 54 to Terminal Board 1TB, Part 4, Terminal 54 (Page 16-3).
Disconnect Lead 93 (which runs from Relay K5, Terminal X1, to Terminal Board 1TB, Part 6, Terminal 93) from Terminal Board 1TB, Part 6, Terminal 93 (Page 16-3).
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 24.
If no: Go to STEP 30.

Step 24. Connect Lead 93 to Terminal Board 1TB, Part 6, Terminal 93 (Page 16-3).
MASTER POWER switch on MAIN CONTROL PANEL (MCP) off.
Multimeter (+) probe on Terminal Board 1TB, Part 6, Terminal 93.
Multimeter (−) probe on bare metal ground.
Less than 270 ohms?
If yes: Go to Step 25.
If no: Replace Lead 54 between Terminal Board 1TB, Part 4, Terminal 54, and Relay K5, Terminal X2 (Page 16-3).
Check circuit breaker does not keep tripping.

Step 25. Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 54 which has Lead 54 running to Relay K5, Terminal X2.
Multimeter (−) probe on bare metal ground.
Less than 270 ohms?
If yes: Replace Relay K5 (Page 11-111).
Check circuit breaker does not keep tripping.
If no: Replace Lead 93 between Relay K5, Terminal X1, and Terminal Board 1TB, Part 6, Terminal 93 (Page 16-3).
Check circuit breaker does not keep tripping.

STEP 26. Connect two Leads 54 to Terminal Board 3TB, Terminals 54 (Page 6-7).
Disconnect P41 from J41.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace launcher directional control valve (Page 9-47).
Check circuit breaker does not keep tripping.
If no: Go to STEP 31.

STEP 27. Disconnect P18 from J18.
Multimeter (+) probe on J15, Socket B.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Junction Box JB3 (Page 6-7).
Check circuit breaker does not keep tripping.
If no: Go to STEP 32.

STEP 28. Connect P47 to J47.
Disconnect P27 from J27.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace left output proximity sensor (Page 3-15).
Check circuit breaker does not keep tripping.
If no: Go to STEP 34.

STEP 29. Remove left infeed conveyor assembly from launcher (Page 6-21).
Connect P21 to J21.
Install left infeed conveyor assembly on launcher (Page 6-21).
Disconnect P25 from J25.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace left tab proximity sensor (Page 6-37).
Check circuit breaker does not keep tripping.
If no: Refer to higher level maintenance.

2-6.43 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING — Continued

STEP 30. Connect Lead 93 to Terminal Board 1TB, Part 6, Terminal 93 (Page 16-3).
Disconnect P1 from J1.
Multimeter (+) probe on P1, Pin R8.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Cable Assembly P1 (Page 11-49).
Check circuit breaker does not keep tripping.
If no: Go to Step 35.

STEP 31. Connect P41 to J41.
Disconnect P42 from J42.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace launcher solenoid valve assembly (Page 4-91).
Check circuit breaker does not keep tripping.
If no: Go to STEP 36.

STEP 32. Connect P18 to J18.
Connect P15 to J15.
Disconnect P48 from J48.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Go to STEP 33.
If no: Go to STEP 37.

STEP 33. Remove right infeed conveyor assembly from launcher (Page 7-7).
Disconnect P22 from J22.
Install right infeed conveyor assembly on launcher (Page 7-7).
Connect P48 to J48.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace right infeed proximity sensor (Page 7-21).
Check circuit breaker does not keep tripping.
If no: Go to STEP 38.

STEP 34. Connect P27 to J27.
Disconnect P39 from J39.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace hydraulic oil level sensor (Page 9-213).
Check circuit breaker does not keep tripping.
If no: Refer to higher level maintenance.

Step 35. Multimeter (+) probe on J1, Socket R8.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Circuit Card Assembly CCA5 (Page 11-265).
Check circuit breaker does not keep tripping.
If no: Replace Circuit Card Assembly CCA6 (Page 11-265).
Check circuit breaker does not keep tripping.

STEP 36. Disconnect eight Leads 54 from Terminal Board 1TB, Part 4, Terminals 54 (Page 16-3).
Multimeter (+) probe on Terminal Board 3TB, Terminal 54.
Multimeter (–) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Wire Bundle Assembly JB3 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Go to Step 39.

STEP 37. Connect P48 to J48.
Disconnect P28 from J28.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace right output proximity sensor (Page 3-15).
Check circuit breaker does not keep tripping.
If no: Refer to higher level maintenance.

STEP 38. Remove right infeed conveyor assembly from launcher (Page 7-7).
Connect P22 to J22.
Install right infeed conveyor assembly on launcher (Page 7-7).
Disconnect P26 from J26.
LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace right tab proximity sensor (Page 7-21).
Check circuit breaker does not keep tripping.
If no: Refer to higher level maintenance.

Step 39. Multimeter (+) probe on P42, Socket A.
Multimeter (–) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Launcher Wheel Solenoid Valve Cable Assembly P42 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Go to STEP 42.

STEP 40. Connect P49 to J49.
Disconnect P51 from J51.
SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace left mine input proximity sensor (Page 4-189).
Check circuit breaker does not keep tripping.
If no: Replace right mine input proximity sensor (Page 4-195).
Check circuit breaker does not keep tripping.

STEP 41. Connect P38 to J38.
Disconnect P55 from J55.
SLEW LEFT/RIGHT Lamps L54 and L55, and LEFT/RIGHT MAG A TAPS PWR ON Lamps L77 and L79 go out?
If yes: Replace pin assembly proximity sensor (Page 4-199).
Check circuit breaker does not keep tripping.
If no: Replace launcher solenoid valve assembly (Page 4-91).
Check circuit breaker does not keep tripping.

2-6.43 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING — Continued

STEP 42. Connect P42 to J42.
Install cover on Junction Box JB3 (Page 6-7).
Disconnect P41 from J41.
Multimeter (+) probe on P41, Socket A.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Oscillator Solenoid Valve Cable Assembly P41 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Go to STEP 43.

STEP 43. Connect P41 to J41.
Disconnect P9 from J9.
Multimeter (+) probe on J9, Socket C.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Launcher Hookup Cable Assembly J9 (Page 16-3).
Check circuit breaker does not keep tripping.
If no: Replace Lead 54 between Circuit Breaker 4CB and Terminal Board 1TB, Part 4, Terminal 54 (Page 16-3).
Check circuit breaker does not keep tripping.

END OF TASK

2-6.44 MAGAZINE STATUS MINE COUNT DISPLAY(S) DO NOT COUNT CORRECTLY

INITIAL SETUP

Test Equipment
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-20
CABLE, WIRE BUNDLE, AND LEAD ASSEMBLIES (Page 16-3)
CIRCUIT CARD ASSEMBLIES (Page 11-265)
JUNCTION BOX JB4 ASSEMBLY AND CONNECTOR ASSEMBLY J4 (Page 16-139)
TERMINAL PANEL ASSEMBLY (Page 11-49)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. MASTER POWER switch on MAIN CONTROL PANEL (MCP) ON.
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
Turn on following BACP circuit breakers:
  MAIN POWER Circuit Breaker S2.
  ELEC POWER Circuit Breaker S3.
  GAUGES Circuit Breaker S4.
  SENSOR/VALVES Circuit Breaker S5.
Any of the following BACP lamps come on:
  LEFT MAG MINE COUNT UP Lamp L85?
  LEFT MAG MINE COUNT DOWN Lamp L86?
  RIGHT MAG MINE COUNT UP Lamp L89?
  RIGHT MAG MINE COUNT DOWN Lamp L90?
  If yes: Go to STEP 2.
  If no: Go to Step 6.

STEP 2. Remove cover from Junction Box JB4 (Page 16-139).
Remove required Connector Assembly J4 lead from Terminal Board 4TB (Page 16-139). (See following Lamp and Lead Removal List.)

LAMP AND LEAD REMOVAL LIST

BACP Lamp On	Remove Lead	From 4TB, Terminal
L85	40	40
L86	41	41
L89	42	42
L90	43	43

Lamp go out?
  If yes: Replace Connector Assembly J4 (Page 16-139).
  Check mine count display(s) count correctly.
  If no: Go to STEP 3.

2-6.44 MAGAZINE STATUS MINE COUNT DISPLAY(S) DO NOT COUNT CORRECTLY — Continued

STEP 3. Install Connector Assembly J4 lead, removed in STEP 2.
Open BACP (Page 11-5).
Remove required Wire Bundle Assembly JB4 lead from Terminal Board 1TB, Part 2 (Page 16-139). (See following Lamp and Lead Removal List.)

LAMP AND LEAD REMOVAL LIST

BACP Lamp On	Remove Lead	From 4TB, Terminal
L85	40	40
L86	41	41
L89	42	42
L90	43	43

Lamp go out?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Go to STEP 4.

STEP 4. Install Wire Bundle Assembly JB4 lead, removed in STEP 3.
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assembly, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Lamp on in STEP 1, change?
If yes: See following CCA Replacement List.

CCA REPLACEMENT LIST

BACP Lamp On in STEP 1	Replace CCA	In Card Rack Assembly, Slot
L85	9	10
L86	9	10
L89	10	9
L90	10	9

Check mine count display(s) count correctly.
If no: Go to STEP 5.

STEP 5. Disconnect P1 from J1.
Position multimeter probes. (See following Probe Position List.)

PROBE POSITION LIST

BACP Lamp On in STEP 1	(+) Probe on P1, Pin	(−) Probe on 1TB, Part 2, Terminal
L85	K4	40
L86	N1	41
L89	K2	42
L90	G1	43

Less than 10 ohms?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check mine count display(s) count correctly.
If no: Replace Cable Assembly P1 (Page 11-49).
Check mine count display(s) count correctly.

Step 6. MINE COUNT CORRECTION UP/DOWN Switch S6 on BACP to UP.
Press and release MINE COUNT CORRECTION MAGAZINE LEFT Switch S7 on BACP.
Press and release MINE COUNT CORRECTION MAGAZINE RIGHT Switch S8 on BACP.
MINE COUNT CORRECTION UP/DOWN Switch S6 on BACP to DOWN.
Press and release MINE COUNT CORRECTION MAGAZINE LEFT Switch S7 on BACP.
Press and release MINE COUNT CORRECTION MAGAZINE RIGHT Switch S8 on BACP.
Both mine counters count up 1 and down 1?
If yes: Go to STEP 7.
If no: Go to Step 8.

STEP 7. Perform B.I.T.E./ALARM CONTROL PANEL Checkout Procedure (BACPCP), Item 14, LEFT DENSITY Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check mine count display(s) count correctly.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check mine count display(s) count correctly.

Step 8. LEFT MAG MINE COUNT UP Lamp L85 and LEFT MAG MINE COUNT DOWN Lamp L86 on BACP blink when MINE COUNT CORRECTION MAGAZINE LEFT Switch S7 on BACP pressed?
If yes: Go to Step 9.
If no: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check mine count display(s) count correctly.

Step 9. RIGHT MAG MINE COUNT UP Lamp L89 and RIGHT MAG MINE COUNT DOWN Lamp L90 on BACP blink when MINE COUNT CORRECTION MAGAZINE RIGHT Switch S8 on BACP pressed?
If yes: Go to STEP 10.
If no: Replace Circuit Card Assembly CCA10 (Page 11-265).
Check mine count display(s) count correctly.

STEP 10. Disconnect P5 from J5.
Multimeter (+) probe on P5, Socket A.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 11.
If no: Go to STEP 19.

Step 11. Multimeter (+) probe on P5, Socket B.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 12.
If no: Go to STEP 17.

2-6.44 MAGAZINE STATUS MINE COUNT DISPLAY(S) DO NOT COUNT CORRECTLY — Continued

Step 12. Multimeter (+) probe on P5, Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to STEP 13.
If no: Go to STEP 15.

STEP 13. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 43.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check mine count display(s) count correctly.
If no: Go to STEP 14.

STEP 14. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 43.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Replace Cable Assembly P1 (Page 11-49).
Check mine count display(s) count correctly.

STEP 15. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 42.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check mine count display(s) count correctly.
If no: Go to STEP 16.

STEP 16. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 42.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Replace Cable Assembly P1 (Page 11-49).
Check mine count display(s) count correctly.

STEP 17. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 41.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Go to STEP 18.

STEP 18. Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 41.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Replace Cable Assembly P1 (Page 11-49).
Check mine count display(s) count correctly.

STEP 19. Remove cover from Junction Box JB4 (Page 16-139).
Multimeter (+) probe on Terminal Board 4TB, Terminal 40.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Connector Assembly J4 (Page 16-139).
Check mine count display(s) count correctly.
If no: Go to STEP 20.

STEP 20. Install cover on Junction Box JB4 (Page 16-139).
Open BACP (Page 11-49).
Multimeter (+) probe on Terminal Board 1TB, Part 2, Terminal 40.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace Wire Bundle Assembly JB4 (Page 16-3).
Check mine count display(s) count correctly.
If no: Replace Cable Assembly P1 (Page 11-49).
Check mine count display(s) count correctly.

END OF TASK

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
B.I.T.E. ALARM PANEL ASSEMBLY (Page 11-195)
CIRCUIT CARD ASSEMBLIES (Page 11-265)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

This symptom applies to failures (abnormal results) detected during the B.I.T.E./ ALARM CONTROL PANEL Checkout Procedure (BACPCP) (TM 9-1095-205-20). If you detect a failure during BACPCP, Items 1 thru 20, go to page listed in following BACPCP Failures Cross Reference List.

BACPCP FAILURES CROSS REFERENCE LIST

BACPCP Item No.	BACPCP Failures	Page No.
1	Initial setup	2-191
2	ENGINE TEMP circuits	2-193
3	ENGINE OIL circuits	2-195
4	Right transmitter auxiliary power supply/ transmitter (TAPS/XMTR) circuits	2-198
5	Left transmitter auxiliary power supply/ transmitter (TAPS/XMTR) circuits	2-198
6	LEFT TAB circuits	2-200
7	RIGHT TAB circuits	2-200
8	Right magazine bypass (MAG BYP RT) circuits	2-202
9	Left magazine bypass (MAG BYP LT) circuits	2-202
10	CONTROL LOGIC and hydraulic (HYD) circuits	2-203
11	LEFT LOAD circuits	2-209
12	RIGHT LOAD circuits	2-209
13	DISPENSE circuits	2-210
14	LEFT DENSITY circuits	2-211
15	RIGHT DENSITY circuits	2-211
16	Left (LT) JAMMED MINE circuits	2-213
17	Right (RT) JAMMED MINE circuits	2-213
18	LEFT UNLOAD circuits	2-214
19	RIGHT UNLOAD circuits	2-214
20	SELF DESTRUCT TIME circuits: LONG	2-215

INITIAL SETUP FAILURES (BACPCP Item No. 1)

STEP 1. Perform BACPCP, Item 1, Initial Setup (TM 9-1095-205-20).
Required lamps come on when MASTER POWER switch on MAIN CONTROL PANEL (MCP) set to ON?
If yes: Go to Step 2.
If no: Go to Step 4.

Step 2. Required lamps come on when ENGINE START/FUEL ON/OFF switch on operator control box (OCB) set to START?
If yes: Go to Step 3.
If no: Go to Step 5.

Step 3. Lamp L66 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Initial Setup passes checkout.
If no: Go to Step 6.

Step 4. TAPS FAIL Lamp L72 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay off and TAPS FAIL Lamp L68 on BACP come on?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Initial Setup passes checkout.
If no: Go to Step 8.

Step 5. ENGINE RUNNING Lamp L60 on B.I.T.E./ALARM CONTROL PANEL (BACP) and ENGINE RUNNING light on OCB stay off?
If yes: Go to Step 9.
If no: Go to Step 12.

Step 6. ENGINE START Lamp L51 on BACP stay on when ENGINE START/FUEL ON/OFF switch on OCB released?
If yes: Go to Step 7.
If no: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check Initial Setup passes checkout.

Step 7. TAPS FAIL Lamp L68 on BACP come on?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check Initial Setup passes checkout.
If no: Go to Step 10.

Step 8. Lamp L67 on BACP stay off and Lamp L66 on BACP stay on when ENGINE START/FUEL ON/OFF switch on operator control box (OCB) set to START?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check Initial Setup passes checkout.
If no: Go to Step 11.

Step 9. RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
ENGINE RUNNING Lamp L60 on BACP and ENGINE RUNNING light on OCB come on?
If yes: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check Initial Setup passes checkout.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Initial Setup passes checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 10. ENGINE OIL Lamp L58 on BACP or ENGINE TEMP Lamp L59 on BACP come on?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check Initial Setup passes checkout.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check Initial Setup passes checkout.

Step 11. TEST MODE Lamp L28 on BACP stay off?
If yes: Replace rotary switch 14SW (Page 11-195).
Check Inital Setup passes checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Inital Setup passes checkout.

Step 12. ENGINE FUEL ON Lamp L50 on BACP, ENGINE START Lamp L51 on BACP, or ENGINE RUNNING Lamp L60 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check Initial Setup passes checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Initial Setup passes checkout.

ENGINE TEMP CIRCUITS FAILURES (BACPCP Item No. 2)

STEP 1. Perform BACPCP, Item 2, ENGINE TEMP Circuits (TM 9-1095-205-20).
Any lamps change when ENGINE UP TO SP Switch S20 on B.I.T.E./ALARM CONTROL PANEL (BACP) set to right?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to Step 2.

Step 2. Any lamp change when ENGINE TEMP SELECT Switch S21 on BACP set to WARNING?
If yes: Go to Step 3.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

Step 3. All lamps change as required when ENGINE TEMP SELECT Switch S21 set to WARNING?
If yes: Go to Step 4.
If no: Go to Step 7.

Step 4. All lamps change as required when ENGINE TEMP SELECT Switch S21 set to SHUTDOWN?
If yes: Go to Step 5.
If no: Go to Step 8.

Step 5. All lamps change as required when ENGINE TEMP SELECT Switch S21 set to NORMAL?
If yes: Go to Step 6.
If no: Go to Step 9.

Step 6. ENGINE TEMP Lamp L29 on BACP go out when MALFUNCTION INDICATORS RESET Switch S9 on BACP pressed?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

Step 7. ENGINE TEMP LAMP L29 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to Step 10.

Step 8. Lamp L66 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to Step 11.

Step 9. ENGINE TEMP LAMP L59 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to Step 13.

Step 10. ENGINE TEMP LAMP L59 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to Step 14.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 11. Lamp L67 on BACP stay on?
If yes: Go to STEP 12.
If no: Go to Step 15.

STEP 12. Open B.I.T.E./ALARM CONTROL PANEL (BACP) (Page 11-265).
Multimeter (+) probe on Terminal Board 1TB, Part 1, Terminal 4.
Multimeter (–) probe on bare metal ground.
More than 13 V dc?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE TEMP Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

Step 13. Lamp L65 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE TEMP Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

Step 14. Lamp L65 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE TEMP Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

Step 15. ENGINE RUNNING Lamp L60 on BACP and ENGINE RUNNING light on operator control box (OCB) go out?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.
If no: Go to STEP 16.

STEP 16. Remove Circuit Card Assembly CCA1 from card rack assembly (Page 11-265).
Install new Circuit Card Assembly CCA1 in card rack assembly (Page 11-265).
Perform BACPCP, Item 2, ENGINE TEMP Circuits (TM 9-1095-205-20).
ENGINE RUNNING Lamp L60 on BACP and ENGINE RUNNING light on OCB go out?
If yes: Check ENGINE TEMP Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check ENGINE TEMP Circuits pass checkout.

ENGINE OIL CIRCUITS FAILURES (BACPCP Item No. 3)

STEP 1. Perform BACPCP, Item 3, ENGINE OIL Circuits (TM 9-1095-205-20).
Any lamps change when ENGINE OIL Switch S19 on B.I.T.E./ALARM CONTROL PANEL (BACP) set to right?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 2.

Step 2. Any lamps change when ENGINE OIL Switch S19 on BACP set to left?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 3.

Step 3. Any lamps change when ENGINE UP TO SP Switch S20 on BACP set to right?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 4.

Step 4. All lamps change as required when ENGINE OIL Switch S19 on BACP set to right second time?
If yes: Go to Step 5.
If no: Go to Step 7.

Step 5. All lamps change as required when ENGINE OIL Switch S19 on BACP set to left second time?
If yes: Go to Step 6.
If no: Go to Step 9.

Step 6. Lamp L67 on BACP stay off, Lamp L66 and ENGINE OIL Lamp L30 on BACP stay on when MALFUNCTION INDICATORS RESET Switch S9 on BACP pressed?
If yes: Replace Pushbutton Switch 7PB (Page 11-195).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 10.

Step 7. Any lamps change?
If yes: Go to Step 8.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.

Step 8. ENGINE OIL Lamp L30 on BACP, ENGINE OIL Lamp L58 on BACP, and SYSTEM MALFUNCTION light on operator control box (OCB) stay off?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 11.

Step 9. ENGINE OIL Lamp L64 on BACP stay off and ENGINE OIL Lamp L58 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 13.

2-6.45 B.i.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 10. Lamp L67 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 14.

Step 11. ENGINE RUNNING Lamp L60 on BACP and ENGINE RUNNING light on OCB stay on?
If yes: Go to STEP 12.
If no: Go to Step 15.

STEP 12. RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
Disconnect engine oil pressure switch lead from oil pressure switch (TM 9-1095-205-20).
Ground engine oil pressure switch lead.
Engine shut down?
If yes: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.

Step 13. ENGINE OIL Lamp L64 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 16.

Step 14. ENGINE OIL Lamp L30 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE OIL Circuits pass checkout.

Step 15. Lamp L66 on BACP stay off and Lamp L67 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 17.

Step 16. ENGINE OIL Lamp L58 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.

Step 17. ENGINE OIL Lamp L64 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 18.

Step 18. ENGINE OIL Lamp L58 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.
If no: Go to Step 19.

Step 19. ENGINE OIL Lamp L30 on BACP stay off?

If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.

If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check ENGINE OIL Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

RIGHT AND LEFT TRANSMITTER AUXILIARY POWER SUPPLY/TRANSMITTER (TAPS/XMTR) CIRCUITS FAILURES (BACPCP Item No. 4 and Item No. 5)

STEP 1. Perform BACPCP, Item 5 [Item 4], Left [Right] Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Any lamps change before XMTR LEFT [XMTR RIGHT] FAIL Switch S24 [Switch S25] on B.I.T.E./ALARM CONTROL PANEL (BACP) set to left?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 2.

Step 2. Any lamps change when XMTR LEFT [XMTR RIGHT] FAIL Switch S24 [Switch S25] on BACP set to left?
If yes: Go to Step 3.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.

Step 3. All lamps change as required when XMTR LEFT [XMTR RIGHT] FAIL Switch S24 [Switch S25] on BACP set to left?
If yes: Go to Step 4.
If no: Go to Step 5.

Step 4. All lamps change as required when XMTR LEFT [XMTR RIGHT] FAIL Switch S24 [Switch S25] on BACP set to right?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 6.

Step 5. XMTR LEFT [RIGHT] FAIL Lamp L70 [Lamp L71] on BACP go off, XMTR LEFT [RIGHT] FAIL Lamp L31 [Lamp L32] on BACP come on, TAPS FAIL Lamp L68 on BACP stay off, and TAPS FAIL Lamp L72 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 8.

Step 6. Any lamp change as required when XMTR LEFT [RIGHT] FAIL Switch S24 [Switch S25] on BACP set to right?
If yes: Go to Step 7.
If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.

Step 7. TAPS FAIL Lamp L72 and TAPS FAIL Lamp L68 on BACP change as required?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 9.

Step 8. TAPS FAIL Lamp L68 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 10.

Step 9. TAPS FAIL Lamp L72 and TAPS FAIL Lamp L68 on BACP not change as required?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Go to Step 11.

Step 10. XMTR LEFT [RIGHT] FAIL Lamp L31 [Lamp L32] on BACP stay off?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.

Step 11. TAPS FAIL Lamp L72 on BACP come on?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] Transmitter Auxiliary Power Supply/Transmitter Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

LEFT AND RIGHT TAB CIRCUITS FAILURES (BACPCP Item No. 6 and Item No. 7)

STEP 1. Perform BACPCP, Item 6 [Item 7], LEFT [RIGHT] TAB Circuits (TM 9-1095-205-20). Any lamps change before MAG BYP LT [RT]/TAB LT [RT] Switch S16 [Switch S17] on B.I.T.E./ALARM CONTROL PANEL (BACP) set to right?

If yes: Replace Circuit Card Assembly CCA17 (Page 11-195). Check LEFT [RIGHT] TAB Circuits pass checkout.

If no: Go to Step 2.

Step 2. Any lamp change during BACPCP, Item 6 [Item 7]?

If yes: Go to Step 3.

If no: Go to STEP 6.

Step 3. All lamps change as required when MAG BYP LT [RT]/TAB LT [RT] Switch S16 [Switch S17] on BACP set to right?

If yes: Go to Step 4.

If no: Replace Circuit Card Assembly CCA17 (Page 11-195). Check LEFT [RIGHT] TAB Circuits pass checkout.

Step 4. All lamps change as required when BUFFER B CCA2 DISP MODE 3 LT [RT] Switch S14 [Switch S15] on BACP set to right?

If yes: Go to Step 5.

If no: Go to Step 7.

Step 5. Any lamp change when BUFFER B CCA2 DISP MODE 3 LT [RT] Switch S14 [Switch S15] on BACP set to left?

If yes: Replace Circuit Card Assembly CCA2 (Page 11-265). Check LEFT [RIGHT] TAB Circuits pass checkout.

If no: Go to Step 9.

STEP 6. Perform BACPCP, Item 4 [Item 5], Left [Right] Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20). Circuits pass checkout?

If yes: Replace Circuit Card Assembly CCA2 (Page 11-265). Check LEFT [RIGHT] TAB Circuits pass checkout.

If no: Replace Circuit Card Assembly CCA17 (Page 11-195). Check LEFT [RIGHT] TAB Circuits pass checkout.

Step 7. Any lamps change?

If yes: Go to Step 8.

If no: Replace Circuit Card Assembly CCA2 (Page 11-265). Check LEFT [RIGHT] TAB Circuits pass checkout.

Step 8. TAB LEFT [RIGHT] FAIL Lamp L34 [Lamp L35] on BACP and MAG BYP LT [RT]/TAB LT [RT] Lamp L61 [Lamp 62] on BACP change as required?

If yes: Replace Circuit Card Assembly CCA4 (Page 11-265). Check LEFT [RIGHT] TAB Circuits pass checkout.

If no: Go to STEP 10.

Step 9. TAB LEFT [RIGHT] FAIL Lamp L34 [Lamp L35] on BACP go off as required?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check LEFT [RIGHT] TAB Circuits pass checkout.
If no: Go to STEP 11.

Step 10. TAB LEFT [RIGHT] FAIL Lamp L34 [Lamp L35] on BACP and SYSTEM MALFUNCTION light on operator control box (OCB) change as required?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check LEFT [RIGHT] TAB Circuits pass checkout.
If no: Go to Step 12.

STEP 11. Perform BACPCP, Item 4 [Item 5], Left [Right] Transmitter Auxiliary Power Supply/Transmitter (TAPS/XMTR) Circuits (TM 9-1095-205-20).
Circuits pass checkout?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check LEFT [RIGHT] TAB Circuits pass checkout.
If no: Replace Pushbutton Switch 7PB (Page 11-195).
Check LEFT [RIGHT] TAB Circuits pass checkout.

Step 12. SYSTEM MALFUNCTION light on OCB stay off?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check LEFT [RIGHT] TAB Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check LEFT [RIGHT] TAB Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

RIGHT AND LEFT MAGAZINE BYPASS (MAG BYP RT AND MAG BYP LT) CIRCUITS FAILURES (BACPCP Item No. 8 and Item No. 9)

NOTE

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Perform BACPCP, Item 9 [Item 8], Left [Right] Magazine Bypass (MAG BYP LT [RT]) Circuits (TM 9-1095-205-20).

Left [right] magazine electrical bypass valve click if Switch S16 [Switch S17] moved right?

If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] Magazine Bypass (MAG BYP LT [RT]) Circuits pass checkout.

If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check Left [Right] Magazine Bypass (MAG BYP LT [RT]) Circuits pass checkout.

CONTROL LOGIC AND HYDRAULIC (HYD) CIRCUITS FAILURES (BACPCP Item No. 10)

STEP 1.

NOTE

When performing the following step, have helper listen for click in the directional control valve.

Perform BACPCP, Item 10, CONTROL LOGIC and Hydraulic (HYD) Circuits (TM 9-1095-205-20). All lamps come on as required if MODE SELECT switch on operator control box (OCB) to DISPENSE?

If yes: Go to Step 2.
If no: Go to Step 8.

Step 2. All lamps come on, LAUNCHER ANGLE meter on B.I.T.E./ALARM CONTROL PANEL (BACP) start moving, and launcher directional control valve clicking?

If yes: Go to Step 3.
If no: Go to Step 9.

Step 3. DISPENSE MODE Lamp L56 and D02 Lamp L39 on BACP change as required?

If yes: Go to Step 4.
If no: Go to Step 13.

Step 4. All lamps change as required, launcher directional control valve stop clicking, and LAUNCHER ANGLE meter on BACP stop moving if HYD FAIL Switch S18 on BACP set to right?

If yes: Go to Step 5.
If no: Go to Step 14.

Step 5. All lamps change as required if HYD FAIL Switch S18 on BACP set to left?

If yes: Go to Step 6.
If no: Go to Step 17.

Step 6. Any lamp change when MALFUNCTION INDICATORS RESET Switch S9 on BACP pressed?

If yes: Go to Step 7.
If no: Replace Pushbutton Switch 7PB (Page 11-195).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 7. Lamp L67 and TAPS FAIL Lamp L68 on BACP change as required?

If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 8. DISPENSE Lamp L1, DESTRUCT NORMAL Lamp L4, or PATTERN 1 Lamp L6 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay off?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 9. LAUNCHER READY Lamp L52 on BACP and LAUNCHER READY light on OCB come on?
If yes: Go to Step 10.
If no: Go to Step 19.

Step 10. SLEW LEFT Lamp L54 and SLEW RIGHT Lamp L55 on BACP cycle on and off alternately when click was heard?
If yes: Go to Step 11.
If no: Go to Step 20.

Step 11. LAUNCHER ANGLE meter needle on BACP move?
If yes: Go to Step 12.
If no: Go to Step 22.

Step 12. LCHR UP TO SP Lamp L69 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 13. D02 Lamp L39 and DISPENSE MODE Lamp L56 on BACP not change as required?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 23.

Step 14. Any lamps change or activity stop?
If yes: Go to Step 15.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 15. SYSTEM MALFUNCTION light on OCB come on?
If yes: Go to Step 16.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 16. Lamp L66 on BACP stay off and LCHR UP TO SP Lamp L69 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 24.

Step 17. Any lamps change?
If yes: Go to Step 18.
If no: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 18. LCHR UP TO SP Lamp L69 on BACP come on and Lamp L66 on BACP go off?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 26.

Step 19. LAUNCHER READY light on OCB come on?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 20. SLEW LEFT Lamp L54 or SLEW RIGHT Lamp L55 on BACP come on?
If yes: Go to Step 21.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 21. RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 3.
Lift and hold LAUNCHER START switch on OCB to START until LAUNCHER READY lamp on OCB comes on.
LAUNCHER ANGLE meter needle on BACP move when launcher moves?
If yes: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 22. RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 3.
Lift and hold LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
LAUNCHER ANGLE meter needle on BACP move when launcher moves?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 23. DISPENSE MODE Lamp L56 on BACP come on?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to STEP 27.

Step 24. Lamp L66 on BACP come on and LCHR UP TO SP Lamp L69 on BACP stay on?
If yes: Go to Step 25.
If no: Go to Step 28.

Step 25. ENGINE RUNNING light on OCB stay on?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA13 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 26. HYD TANK LEVEL Lamp L57 on BACP and SYSTEM MALFUNCTION light on OCB stay on and HYD FAIL Lamp L33 stay off?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 29.

STEP 27. Remove mine gate pin from launcher (TM 9-1095-205-10).
RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to DISPENSE.
PATTERN SELECTOR switch on OCB to 3.
Lift and hold LAUNCHER START switch on OCB to START until LAUNCHER READY light on OCB comes on.
TAPS PWR ON Lamp L77 and TAPS PWR ON Lamp L79 on BACP come on?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 28. LAUNCHER READY light on OCB and LAUNCHER READY Lamp L52 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 30.

Step 29. HYD FAIL Lamp L63 on BACP stay off and SYSTEM MALFUNCTION light on OCB stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 31.

Step 30. LAUNCHER ANGLE meter needle on BACP swing back and forth?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 32.

Step 31. SYSTEM MALFUNCTION light on OCB stay on?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 33.

Step 32. HYD TANK LEVEL Lamp L57 on BACP only lamp to change?
If yes: Replace Circuit Card Assembly CCA2 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 34.

Step 33. HYD TANK LEVEL Lamp L57 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 34. Lamp L66 or HYD FAIL Lamp L63 on BACP not change as required?
If yes: Go to Step 35.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

Step 35. LCHR UP TO SP Lamp L69 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.
If no: Go to Step 36.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 36. HYD TANK LEVEL Lamp L57 on BACP stay off?

If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check CONTROL LOGIC and Hydraulic (HYD) Circuits pass checkout.

LEFT AND RIGHT LOAD CIRCUITS FAILURES (BACPCP Item No. 11 and Item No. 12)

STEP 1. Perform BACPCP, Item 11 [Item 12], LEFT [RIGHT] LOAD Circuits (TM 9-1095-205-20).
D02 Lamp L39 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay off?
If yes: Go to Step 2.
If no: Go to Step 3.

Step 2. MODE SELECT switch on operator control box (OCB) to DISPENSE.
D01 Lamp L38 on BACP come on?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check LEFT [RIGHT] LOAD Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LEFT [RIGHT] LOAD Circuits pass checkout.

Step 3. D07 [D010] Lamp L44 [Lamp L47] and LOAD Lamp L74 [Lamp L82] on BACP stay off?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LEFT [RIGHT] LOAD Circuits pass checkout.
If no: Go to Step 4.

Step 4. D07 [D010] Lamp L44 [Lamp L47] on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check LEFT [RIGHT] LOAD Circuits pass checkout.
If no: Go to Step 5.

Step 5. LOAD Lamp L74 [Lamp L82] on BACP stay off?
If yes: Go to STEP 6.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check LEFT [RIGHT] LOAD Circuits pass checkout.

STEP 6.

NOTE

If checking LEFT LOAD Circuit failures, perform BACPCP Item 12 RIGHT LOAD Circuits. If checking RIGHT LOAD Circuit failures, perform BACPCP Item 11 LEFT LOAD Circuits.

Perform BACPCP Item 11 LEFT [Item 12 RIGHT] LOAD Circuits test as applicable.
LOAD Lamp L82 [Lamp L74] on BACP come on?
If yes: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check LOAD Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LOAD Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

DISPENSE CIRCUITS FAILURES (BACPCP Item No. 13)

STEP 1. Perform BACPCP, Item 13, DISPENSE Circuits (TM 9-1095-205-20).
D04 Lamp L41, D05 Lamp L42, and D06 Lamp L43 on B.I.T.E./ALARM CONTROL PANEL (BACP) change as required?
If yes: Go to Step 2.
If no: Go to STEP 3.

Step 2. SLEW LEFT Lamp L54 and SLEW RIGHT Lamp L55 on BACP cycle alternately?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check DISPENSE Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check DISPENSE Circuits pass checkout.

STEP 3. RUN/TEST Switch S1 on BACP to RUN.
Start engine (TM 9-1095-205-10).
MODE SELECT switch on operator control box (OCB) to DISPENSE.
PATTERN SELECTOR switch on OCB to 5 for 5 seconds.
Repeat above step for patterns 4, 3, 2, and 1.
Launcher oscillate properly in each pattern?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check DISPENSE Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check DISPENSE Circuits pass checkout.

LEFT AND RIGHT DENSITY CIRCUITS FAILURES (BACPCP Item No. 14 and Item 15)

STEP 1. Perform BACPCP, Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
Following lamps on B.I.T.E./ALARM CONTROL PANEL (BACP) change as required:
FIRE LEFT [RIGHT] Lamp L2 [Lamp L3]?
DENSITY LEFT [RIGHT] MAGAZINE 0.001 Lamp L12 [Lamp L18]?
DENSITY LEFT [RIGHT] MAGAZINE 0.005 Lamp L13 [Lamp L19]?
DENSITY LEFT [RIGHT] MAGAZINE 0.007 Lamp L14 [Lamp L20]?
DENSITY LEFT [RIGHT] MAGAZINE 0.010 Lamp L15 [Lamp L21]?
DENSITY LEFT [RIGHT] MAGAZINE 0.025 Lamp L16 [Lamp L22]?
DENSITY LEFT [RIGHT] MAGAZINE MAX Lamp L17 [Lamp L23]?
If yes: Go to Step 2.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

Step 2. LEFT [RIGHT] MAGAZINE STATUS MINE COUNT display on operator control box (OCB) change?
If yes: Go to Step 3.
If no: Go to Step 5.

Step 3. Following lamps on BACP change as required:
D07 [D010] Lamp L44 [Lamp L47]?
D08 [D011] Lamp L45 [Lamp L48]?
D09 [D012] Lamp L46 [Lamp L49]?
If yes: Go to Step 4.
If no: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

Step 4. LEFT [RIGHT] MAG B CCA7 [CCA8] FIRE Lamp L87 [Lamp L91] on BACP change as required?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.
If no: Go to STEP 6.

Step 5. LEFT [RIGHT] MAG B CCA7 [CCA8] FIRE Lamp L87 [Lamp L91] on BACP change as required?
If yes: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.
If no: Go to Step 7.

STEP 6. Open BACP (Page 11-265).
Tag and mark Circuit Card Assemblies CCA9 and CCA10 (Page 11-265).
Remove Circuit Card Assembly CCA9 from card rack assembly, Slot 9.
Remove Circuit Card Assembly CCA10 from card rack assemby, Slot 10.
Install Circuit Card Assembly CCA9 in card rack assembly, Slot 10.
Install Circuit Card Assembly CCA10 in card rack assembly, Slot 9.
Perform BACPCP, Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
LEFT [RIGHT] MAG B CCA7 [CCA8] FIRE Lamp L87 [Lamp L91] on BACP change as required?
If yes: Replace Circuit Card Assembly CCA9 [CCA10], which is in card rack assembly, Slot 10 [Slot 9].
Check LEFT [RIGHT] DENSITY Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 7. LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] change as required?

If yes: Replace Circuit Card Assembly CCA9 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

If no: Go to Step 8.

Step 8. D07 [D010] Lamp L44 [Lamp L47] change as required?

If yes: Go to Step 9.

If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

Step 9. D08 [D011] Lamp L45 [Lamp L48] change as required?

If yes: Go to Step 10.

If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

Step 10. D09 [D012] Lamp L46 [Lamp L49] change as required?

If yes: Go to Step 11.

If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

STEP 11. Open BACP (Page 11-265).
Tag and mark Circuit Card Assemblies CCA5 and CCA6 (Page 11-265).
Remove Circuit Card Assembly CCA5 from card rack assembly, Slot 5.
Remove Circuit Card Assembly CCA6 from card rack assembly, Slot 6.
Install Circuit Card Assembly CCA5 in card rack assembly, Slot 6.
Install Circuit Card Assembly CCA6 in card rack assembly, Slot 5.
Perform BACPCP, Item 14 [Item 15], LEFT [RIGHT] DENSITY Circuits (TM 9-1095-205-20).
LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] on BACP, LEFT [RIGHT] MAG B CCA7 [CCA8] FIRE Lamp L87 [Lamp L91] on BACP, and LEFT [RIGHT] MAGAZINE STATUS MINE COUNT display on OCB change?

If yes: Replace Circuit Card Assembly CCA6 [CCA5] which is in card rack assembly, Slot 5 [Slot 6].
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

If no: Replace Circuit Card Assembly CCA7 (Page 11-265).
Check LEFT [RIGHT] DENSITY Circuits pass checkout.

LEFT (LT) AND RIGHT (RT) JAMMED MINE CIRCUITS FAILURES (BACPCP Item No. 16 and Item No. 17)

STEP 1. Perform BACPCP, Item 16 [Item 17], Left [Right] JAMMED MINE Circuits (TM 9-1095-205-20).
All lamps come on as required?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check Left [Right] JAMMED MINE Circuits pass checkout.
If no: Go to Step 2.

Step 2. All lamps stay off?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check Left [Right] JAMMED MINE Circuits pass checkout.
If no: Go to Step 3.

Step 3. SYSTEM MALFUNCTION light on operator control box (OCB) stay off?
If yes: Replace Circuit Card Assembly CCA4 (Page 11-265).
Check Left [Right] JAMMED MINE Circuits pass checkout.
If no: Go to Step 4.

Step 4. LAUNCHER BRAKE SOL Lamp L36 on BACP stay off?
If yes: Go to Step 5.
If no: Go to Step 6.

Step 5. Helper listen for click from launcher brake solenoid valve.
Perform BACPCP, Item 16 [Item 17], Left [Right] JAMMED MINE Circuits (TM 9-1095-205-20).
Launcher brake solenoid valve click?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] JAMMED MINE Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check Left [Right] JAMMED MINE Circuits pass checkout.

Step 6. Helper listen for click from launcher run valve solenoid.
MODE SELECT switch on OCB to DISPENSE.
LAUNCHER START switch on OCB to START until LAUNCHER READY lamp on OCB comes on.
Launcher run valve solenoid click?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check Left [Right] JAMMED MINE Circuits pass checkout.
If no: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check Left [Right] JAMMED MINE Circuits pass checkout.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

LEFT AND RIGHT UNLOAD CIRCUITS FAILURES (BACPCP Item No. 18 and Item No. 19)

STEP 1. Perform BACPCP, Item 18 [Item 19], LEFT [RIGHT] UNLOAD Circuits (TM 9-1095-205-20). D02 Lamp L39 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay off?
- If yes: Replace Circuit Card Assembly CCA16 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.
- If no: Go to Step 2.

Step 2. LEFT [RIGHT] UNLOAD Lamp L25 [Lamp 27] on BACP stay off?
- If yes: Replace Circuit Card Assembly CCA15 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.
- If no: Go to Step 3.

Step 3. D08 [D011] Lamp L45 [Lamp L48] stay off?
- If yes: Go to Step 4.
- If no: Go to Step 5.

Step 4. Any other lamps stay off?
- If yes: Replace Circuit Card Assembly CCA3 (Page 11-265). Check LEFT [RIGHT[UNLOAD Circuits pass checkout.
- If no: Replace Circuit Card Assembly CCA16 (Page 11-265). Check LEFT [RIGHT[UNLOAD Circuits pass checkout.

Step 5. LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] on BACP stay off?
- If yes: Go to Step 6.
- If no: Go to Step 7.

Step 6. Any other lamps stay off?
- If yes: Replace Circuit Card Assembly CCA9 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.
- If no: Replace Circuit Card Assembly CCA14 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.

Step 7. LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] UNLOAD Lamp L75 [Lamp L83] stay off?
- If yes: Go to Step 8.
- If no: Replace Circuit Card Assembly CCA14 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.

Step 8. Any other lamp stay off?
- If yes: Replace Circuit Card Assembly CCA9 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.
- If no: Replace Circuit Card Assembly CCA14 (Page 11-265). Check LEFT [RIGHT] UNLOAD Circuits pass checkout.

SELF DESTRUCT TIME CIRCUITS: LONG FAILURES (BACPCP Item No. 20)

STEP 1. Perform BACPCP, Item 20, SELF DESTRUCT TIME Circuits: LONG (TM 9-1095-205-20).
DESTRUCT NORMAL Lamp L4 on B.I.T.E./ALARM CONTROL PANEL (BACP) stay off?
If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Go to Step 2.

Step 2. TAPS FAIL Lamp L72 on BACP stay on?
If yes: Go to Step 3.
If no: Go to Step 4.

Step 3. Any lamps not change as required?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.

Step 4. XMTR LEFT FAIL Lamp L70 on BACP stay on?
If yes: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Go to Step 5.

Step 5. TAPS FAIL Lamp L68 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA14 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Go to Step 6.

Step 6. XMTR RIGHT FAIL Lamp L71 on BACP stay on?
If yes: Go to Step 7.
If no: Go to Step 8.

Step 7. XMTR RIGHT FAIL Lamp L32 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Replace Circuit Card Assembly CCA17 (Page 11-195).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.

Step 8. DESTRUCT LONG Lamp L5 on BACP stay off?
If yes: Go to Step 9.
If no: Go to Step 10.

Step 9. D03 Lamp L40 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA3 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.

tep 10. D03 Lamp L40 on BACP stay off?
If yes: Replace Circuit Card Assembly CCA16 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.
If no: Go to Step 11.

2-6.45 B.I.T.E./ALARM CONTROL PANEL CHECKOUT PROCEDURE HAS FAILURES — Continued

Step 11. SELF DESTRUCT TIME switch on operator control box (OCB) return to NORMAL if required?

If yes: Replace Circuit Card Assembly CCA15 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.

If no: Replace Circuit Card Assembly CCA1 (Page 11-265).
Check SELF DESTRUCT TIME Circuits: LONG pass checkout.

END OF TASK

2-6.46 LUBRICANT FLOWS FROM HYDRAULIC PUMP DRIVE GEARBOX BREATHER

INITIAL SETUP

Tools:
Hydraulic systems test and repair tool
outfit (HSTRU) 4940-01-036-5784:
Hand pump
Cap (3) 4730-00-625-2212
Cap (6) 4730-00-727-7485

References:
LAUNCHER AND OSCILLATOR PUMPS INSTALLATION (Page 15-275)
LEFT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-307)
RIGHT MAGAZINE PUMP ASSEMBLY AND SERVO ACTUATOR (Page 15-351)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1.

NOTE

Do not remove fittings from pump.

Remove left magazine pump from dispenser (Page 15-307).
Cap pump ports. (See following Port Capping List.)

PORT CAPPING LIST

Port	Cap Size
Servo filter feed hose adapter	4730-00-625-2212
Suction hose special elbow	4730-00-727-7485
Feed line A adapter	4730-00-727-7485
Feed line B adapter	4730-00-727-7485
Servo actuator drain hose tee	4730-00-625-2212

Fill pump with hydraulic oil through pump drain tee.
Connect HSTRU hand pump to pump drain tee.
Operate hand pump until pressure is 15 psi (103.4 kPa).
Oil leaking through input shaft lip seal?
If yes: Replace input shaft lip seal (Page 15-307).
Install left magazine pump on dispenser (Page 15-307).
Check lubricant does not flow from gearbox breather.
If no: Go to STEP 2.

2-6.46 LUBRICANT FLOWS FROM HYDRAULIC PUMP DRIVE GEARBOX BREATHER — Continued

STEP 2.

NOTE

Do not remove fittings from pump.

Remove right magazine pump from dispenser (Page 15-351).
Cap pump ports. (See following Port Capping List.)

PORT CAPPING LIST

Port	Cap Size
Servo filter feed hose adapter	4730-00-625-2212
Suction hose special elbow	4730-00-727-7485
Feed line A adapter	4730-00-727-7485
Feed line B adapter	4730-00-727-7485

Fill pump with hydraulic oil through pump drain tee.
Connect HSTRU hand pump to pump drain tee.
Operate hand pump until pressure is 15 psi (103.4 kPa).
Oil leaking through input shaft lip seal?
If yes: Replace input shaft lip seal (Page 15-351).
Install left magazine pump on dispenser (Page 15-307).
Check lubricant does not flow from gearbox breather.
If no: Replace launcher pump input shaft lip seal (Page 15-275).
Check lubricant does not flow from gearbox breather.

END OF TASK

Section III. TROUBLESHOOTING (GENERAL SUPPORT)

2-7 INTRODUCTION

A. GENERAL

This section tells you how to troubleshoot the M128 Ground Vehicle Mine Dispenser at General Support Maintenance. You start with the symptom of an equipment failure (fault). A list of fault symptoms is contained in the Symptom Index (page 2-222). When troubleshooting the mine dispenser, always start with the Symptom Index.

After completing a troubleshooting task, always make a functional check of the system. This check is to make sure that the fault has been corrected. If the symptom still exists, notify your supervisor.

B. SYMPTOM INDEX

The Symptom Index (page 2-222) lists the symptoms of faults that may occur in the mine dispenser. The list is arranged by system and major component. Each symptom is followed by the page number of the troubleshooting procedure used to correct the fault.

Determine the mine dispenser system or major component in which the symptom has occurred. Locate the symptom in the Symptom Index. Then perform the troubleshooting procedure indicated to correct the fault.

The Symptom Index does not list everything that can go wrong with the mine dispenser. If the fault and corrective action for a symptom are easy to see, the symptom is not listed. For example, things like flat tires and broken tail lights are not listed. Other symptoms are not listed because you do not have the parts, tools, or procedures to fix them. If you find a symptom that is not listed and that you cannot fix, notify your supervisor.

C. TROUBLESHOOTING PROCEDURES

Before troubleshooting the mine dispenser, make the following checks:

- Operating controls were in the correct position for operation when the symptom occurred.
- Direct support performed any required troubleshooting.
- Operating controls are in correct position to determine if the symptom still exists.
- Symptom still exists.

Troubleshooting procedures are in step order. Perform the first troubleshooting step, and answer the question following that step. Then go to the step indicated, and perform that step. Continue the steps until you are told what maintenance to perform or until you are referred to higher level maintenance.

Some troubleshooting steps begin with the word step in all capitals (STEP). In such a STEP, you are told to leave equipment open or disconnected. After you correct the fault, review the troubleshooting procedure for the word STEP (in all capitals). Whenever you find STEP, close or connect equipment as required to place the mine dispenser in operating condition.

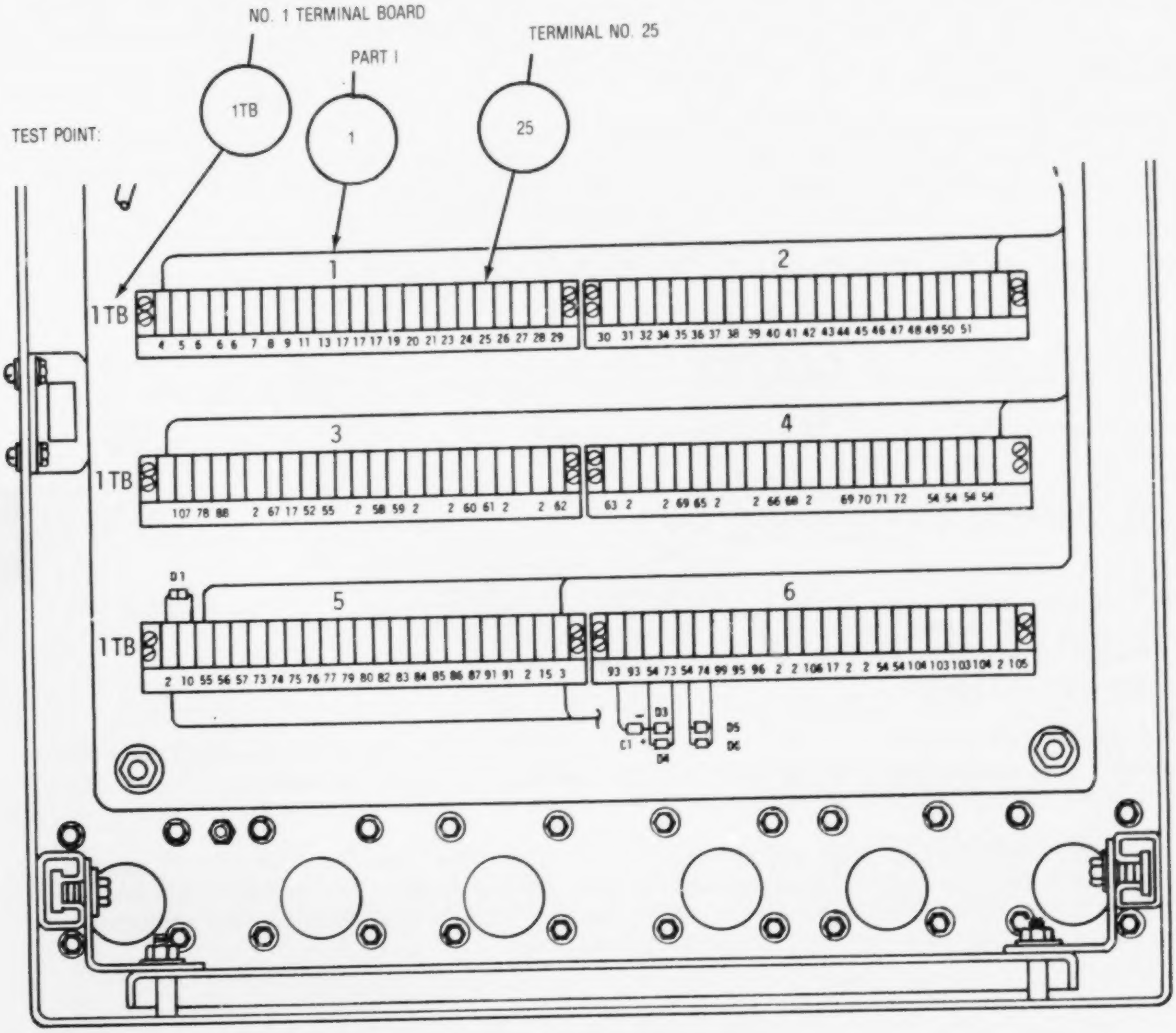
GO TO NEXT PAGE

C. TROUBLESHOOTING PROCEDURES — Continued

When the mine dispenser is operational, make a functional check of the system. This check is to make sure that the symptom no longer exists. If the symptom still exists, notify your supervisor.

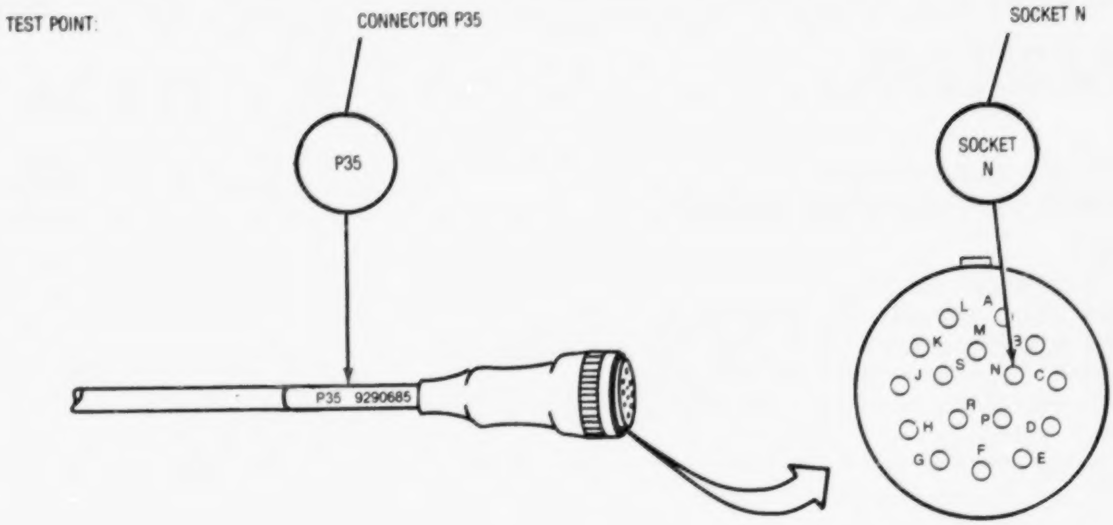
Some troubleshooting procedures have references to test points where multimeter probes are to be placed. These references are electrical circuit designations. The following two examples will help you understand these references.

EXAMPLE NO. 1: Multimeter (+) probe on Terminal Board 1TB, Part I, Terminal 25.


NO. 1 TERMINAL BOARD
TERMINAL NO. 25
PART I
TEST POINT:
1TB
1
25
1
2
1TB
4 5 6 6 6 7 8 9 11 13 17 17 17 19 20 21 23 24 25 26 27 28 29
30 31 32 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51
3
4
1TB
107 78 88 2 67 17 52 55 2 58 59 2 2 60 61 2 2 62
63 2 2 69 65 2 2 66 68 2 69 70 71 72 54 54 54 54
D1
5
6
1TB
2 10 55 56 57 73 74 75 76 77 79 80 82 83 84 85 86 87 91 91 2 15 3
93 93 54 73 54 74 99 95 96 2 2 106 17 2 2 54 54 104 103 103 104 2 105
D3
C1
D4
D5
D6

B.I.T.E./ALARM CONTROL PANEL (BACP)

EXAMPLE NO. 2: Multimeter (–) probe on P35, Socket N.


TEST POINT:
CONNECTOR P35
SOCKET N
P35
SOCKET N
P35 9290685
L
A
M
K
B
S
N
J
C
R
H
P
D
G
F
E

The mine dispenser troubleshooting procedures will help you isolate a fault to an assembly, part, or circuit. Replace the assembly or part as directed. Mine dispenser circuits may consist of several parts. Replace only that part of the circuit that contains the fault.

Refer to How to Use this Manual (See page vi) for an example of how to use the troubleshooting procedures to correct a mine dispenser fault.

D. LOCATION OF CONNECTORS/RECEPTACLES

Refer to Location of Connector/Receptacles, page 2-5, to locate connectors/receptacles.

2-8 SYMPTOM INDEX

Page Number

ELECTRICAL SYSTEM

B.I.T.E./ALARM CONTROL PANEL

Circuit Breaker S3, S4, or S5 keeps tripping 2-232

OPERATOR CONTROL BOX

SYSTEM MALFUNCTION light is lit 2-231

ENGINE

Engine knocks loudly/noticeably 2-223
Engine oil pressure below 20 psi at full throttle 2-224

MAGAZINE

Magazine will not accept mines 2-225
Magazine will not return mines to infeed chute 2-227
Magazine will not stop when full or when advancing mines: mines fall from outfeed chute onto chassis deck 2-228
Magazine will not stop when returning mines to infeed chute 2-229

2-9 TROUBLESHOOTING PROCEDURES (GENERAL SUPPORT)

This paragraph contains procedures for troubleshooting authorized at general support level maintenance.

2-9.1 ENGINE KNOCKS LOUDLY/NOTICEABLY

INITIAL SETUP

Reference:
ROTARY OIL PUMP ASSEMBLY (Page 19-149)

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Remove regulator from rotary oil pump (Page 19-149).
Move regulator piston in regulator.
Piston bind?
If yes: Replace rotary oil pump regulator (Page 19-149).
Check engine does not knock.
If no: Replace rotary oil pump (Page 19-149).
Check engine does not knock.

END OF TASK

2-9.2 ENGINE OIL PRESSURE BELOW 20 PSI AT FULL THROTTLE

INITIAL SETUP

Reference:
ROTARY OIL PUMP ASSEMBLY (Page 19-149)

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

Remove rotary oil pump regulator (Page 19-149).
Move regulator piston in regulator.
Piston bind?
  If yes: Replace rotary oil pump regulator (Page 19-149).
    Check engine oil pressure is normal.
  If no: Replace rotary oil pump (Page 19-149).
    Check engine oil pressure is normal.

END OF TASK

2-9.3 MAGAZINE WILL NOT ACCEPT MINES

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
ELECTRICAL ENCLOSURE ASSEMBLY AND SHOCK MOUNTS (Page 11-5)
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)
OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (Page 3-15)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-55)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. MASTER POWER switch on MAIN CONTROL PANEL ON.
Turn following B.I.T.E./ALARM CONTROL PANEL (BACP) switches on:
MAIN POWER Circuit Breaker S2.
ELEC POWER Circuit Breaker S3.
GAUGES Circuit Breaker S4.
SENSOR/VALVES Circuit Breaker S5.
Open BACP (Page 11-5).
Multimeter (+) probe on Terminal Board 1TB, Part 4, Terminal 65 [Terminal 64].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 2.
If no: Replace Cable Assembly P27 [P28] (Page 20-3 [Page 20-55]).
Check magazine will accept mines.

Step 2. Helper press left [right] magazine output proximity sensor arm (Page 3-15).
More than 1 V dc?
If yes: Replace Cable Assembly P27 [P28] (Page 20-3 [Page 20-55]).
Check magazine will accept mines.
If no: Go to Step 3.

Step 3. Multimeter (+) probe on Terminal Board 1TB, Part 3, Terminal 61 [Terminal 58].
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Go to Step 4.
If no: Go to STEP 7.

2-9.3 MAGAZINE WILL NOT ACCEPT MINES — Continued

Step 4. Helper press left [right] magazine infeed sensor lever (Page 6-37) [Page 7-21]).
More than 1 V dc?
If yes: Go to STEP 5.
If no: Go to STEP 6.

STEP 5. Disconnect P47 [P48] from J47 [J48].
Multimeter (+) probe on J47 [J48], Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine will accept mines.
If no: Replace Cable Assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine will accept mines.

STEP 6. Disconnect P47 [P48] from J47 [J48].
Multimeter (+) probe on J47 [J48], Socket J.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine will accept mines.
If no: Replace Cable Assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine will accept mines.

STEP 7. Disconnect P47 [P48] from J47 [J48].
More than 9 V dc?
If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine will accept mines.
If no: Replace Cable Assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine will accept mines.

END OF TASK

2-9.4 MAGAZINE WILL NOT RETURN MINES TO INFEED CHUTE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)
RIGHT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-55)

OVERVIEW

After you correct fault, review this procedure. Certain instructions tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Disconnect Connector P47 [P48] from Receptacle J47 [J48].
MASTER POWER switch on MAIN CONTROL PANEL ON.
Multimeter (+) probe on Receptacle J47 [J48], Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?

If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine returns mines to infeed chute.

If no: Replace cable assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine returns mines to infeed chute.

END OF TASK

2-9.5 MAGAZINE WILL NOT STOP WHEN FULL OR WHEN ADVANCING MINES: MINES FALL FROM OUTFEED CHUTE ONTO CHASSIS DECK

INITIAL SETUP

Personnel Required:
Electrical repairer

References:
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)
RIGHT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-55)

OVERVIEW

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

Replace Cable Assembly P27 [P28] (Page 20-3 [Page 20-55]).
Check that magazine will stop when full or when advancing mines.

END OF TASK

2-9.6 MAGAZINE WILL NOT STOP WHEN RETURNING MINES TO INFEED CHUTE

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20
LEFT INFEED CONVEYOR PROXIMITY SENSORS (Page 6-37)
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)
RIGHT INFEED CONVEYOR PROXIMITY SENSORS (Page 7-21)
RIGHT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-55)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

This symptom applies either to left or right magazine. The right magazine information is in brackets ([ ]) immediately following information for left magazine.

STEP 1. Connect operator control box (OCB) to mine dispenser (TM 9-1095-205-10).
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
Set RUN/TEST switch on BACP to TEST.

NOTE

With RUN/TEST switch in TEST, engine and dispenser operations will be simulated electronically through the B.I.T.E. system. Indicators will function as if engine and dispenser were operating.

Move left [right] magazine so infeed conveyor tabs are equal distance from sensor and no tab is in front of sensor (Page 6-37 [Page 7-21]).
Start engine (TM 9-1095-205-10).
MODE SELECT switch on OCB to LOAD/UNLOAD.
LEFT [RIGHT] MAGAZINE LOAD/OFF/UNLOAD switch on OCB to UNLOAD.
Helper push down left [right] magazine input proximity sensor lever in left [right] infeed conveyor (Page 6-37 [Page 7-21]).
Press COUNT LOAD/UNLOAD MAGAZINE LEFT [RIGHT] Switch S30 [Switch S31] on BACP.
LEFT [RIGHT] MAG LOAD/UNLOAD CCA9 [CCA10] RUN Lamp L73 [Lamp L81] on BACP go out?
If yes: Go to STEP 2.
If no: Go to STEP 3.

2-9.6 MAGAZINE WILL NOT STOP WHEN RETURNING MINES TO INFEED CHUTE — Continued

STEP 2. Disconnect P47 [P48] from J47 [J48].
Multimeter (+) probe on J47 [J48], Socket J.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine stops when returning mines to infeed chute.
If no: Replace Cable Assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine stops when returning mines to infeed chute.

STEP 3. Disconnect P47 [P48] from J47 [J48].
Multimeter (+) probe on J47 [J48], Socket C.
Multimeter (−) probe on bare metal ground.
More than 9 V dc?
If yes: Replace left [right] magazine internal wiring harness (Page 20-3 [Page 20-55]).
Check magazine stops when returning mines to infeed chute.
If no: Replace Cable Assembly J47 [J48] (Page 20-3 [Page 20-55]).
Check magazine stops when returning mines to infeed chute.

END OF TASK

2-9.7 SYSTEM MALFUNCTION LIGHT IS LIT

INITIAL SETUP

Personnel Required:
Electrical repairer

Reference:
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)

Replace Cable Assembly P39 (Page 20-3).

Check that SYSTEM MALFUNCTION lamp on operator control box does not come on during operation.

END OF TASK

2-9.8 CIRCUIT BREAKER S3, S4, OR S5 KEEPS TRIPPING

INITIAL SETUP

Test Equipment:
Multimeter 6625-00-999-6282

Personnel Required:
Electrical repairer

References:
TM 9-1095-205-20
LEFT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-3)
RIGHT MAGAZINE CONTROL WIRING INSTALLATION (Page 20-55)

OVERVIEW

After you correct fault, review steps beginning with STEP (in capitals). Instructions in these steps tell you to leave parts open or disconnected. You must close or connect these parts so M128 is ready for use.

STEP 1. Disconnect P15 from J15.
Remove cover from B.I.T.E./ALARM CONTROL PANEL (BACP) (TM 9-1095-205-20).
MASTER POWER switch on MAIN CONTROL PANEL ON.
Turn on following BACP circuit breakers:
  MAIN POWER Circuit Breaker S2.
  ELEC POWER Circuit Breaker S3.
  GAUGES Circuit Breaker S4.
  SENSOR/VALVES Circuit Breaker S5.
Following Lamps on BACP go out:
  SLEW LEFT Lamp L54?
  SLEW RIGHT Lamp L55?
  LEFT MAG A CCA5 TAPS PWR ON Lamp L77?
  RIGHT MAG A CCA6 TAPS PWR ON Lamp L79?
  If yes: Go to STEP 2.
  If no: Go to STEP 5.

STEP 2. Connect P15 to J15.
Disconnect P47 from J47.
Following Lamps on BACP go out:
  SLEW LEFT Lamp L54?
  SLEW RIGHT Lamp L55?
  LEFT MAG A CCA5 TAPS PWR ON Lamp L77?
  RIGHT MAG A CCA6 TAPS PWR ON LAMP L79?
  If yes: Replace left magazine internal wiring harness (Page 20-3).
  Check circuit breakers do not trip.
  If no: Go to STEP 3.

STEP 3. Connect P47 to J47.
Disconnect P15 from J15.
Multimeter (+) probe on P15, Pin E.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
  If yes: Replace Cable Assembly P39 (Page 20-3).
  Check circuit breakers do not trip.
  If no: Go to Step 4.

Step 4. Multimeter (+) probe on P15, Pin g.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Cable Assembly P27 (Page 20-3).
Check circuit breakers do not trip.
If no: Replace Cable Assembly J47 (Page 20-3)
Check circuit breakers do not trip.

STEP 5. Connect P15 to J15.
Disconnect P48 from J48.
Following lamps on BACP go out:
SLEW LEFT Lamp L54?
SLEW RIGHT Lamp L55?
LEFT MAG A CCA5 TAPS PWR ON Lamp L77?
RIGHT MAG A CCA6 TAPS PWR ON Lamp L79?
If yes: Replace right magazine internal wiring harness (Page 20-55).
Check circuit breakers do not trip.
If no: Go to STEP 6.

STEP 6. Connect P48 to J48.
Disconnect P18 from J18.
Multimeter (+) probe on P18, Pin a.
Multimeter (−) probe on bare metal ground.
Less than 2.5 ohms?
If yes: Replace Cable Assembly P28 (Page 20-55).
Check circuit breakers do not trip.
If no: Replace Cable Assembly J48 (Page 20-55).
Check circuit breakers do not trip.

END OF TASK

Section IV. PREPARATION FOR STORAGE OR SHIPMENT

2-10 PREPARATION FOR STORAGE OR SHIPMENT

a. Preparation for storage: In preparation for storage, the M128 Ground Vehicle Mine Dispenser will have an annual PMCS performed. Perform this PMCS according to TM 9-1095-205-20-1 (Maintenance Instructions, Organizational Maintenance: M128 Ground Vehicle Mine Dispenser). The M128 will be prepared for storage according to TB 9-1095-205-23 (Dispenser, Mine: Ground Vehicle M128 — Preparation for Shipment and Storage).

b. Storage: The M128 will be stored in a nonuse area and will have the protective cover installed. All scheduled maintenance and services will be performed during storage.

c. Preparation for shipment: The M128 will be prepared for shipment according to the following publications:

TB 9-1095-205-23	Dispenser, Mine: Ground Vehicle M128 — Preparation for Shipment and Storage
TM 55-1095-205-14	Transportability Guidance: M128 Ground Vehicle Mine Dispenser.

CHAPTER 3

LAUNCHER FEED SYSTEM (DIRECT SUPPORT)

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

3-1 COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

3-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

No special tools are authorized for the M128 Ground Vehicle Mine Dispenser.

3-3 REPAIR PARTS

Repair parts are listed and illustrated in the repair parts and special tools list TM 9-1095-205-34P, covering direct support and general support maintenance for this equipment.

Section II. MAINTENANCE PROCEDURES

3-4 TWIST CHUTE AND TWIN DROP CHUTE ASSEMBLIES

DESCRIPTION

This task covers:
A. TWIN DROP CHUTE ASSEMBLY REMOVAL (p 3-3)
B. TWIN DROP CHUTE ASSEMBLY INSTALLATION (p 3-7)
C. TWIST CHUTE ASSEMBLY REMOVAL (p 3-10)
D. TWIST CHUTE ASSEMBLY INSTALLATION (p 3-11)

INITIAL SETUP

Tools and Special Tools:
General mechanic's tool kit
 5180-00-177-7033:
  No. 2 cross tip screwdriver
  7/16 inch socket
  9/16 inch socket
  9/16 inch box end wrench
  2 inch extension
  Ratchet handle
  Aligning punch

Materials/Parts:
Lock washer (3) 5310-00-579-5752
Lock washer (4) 5310-00-003-4094
Lock washer (4) 5310-00-582-5965
Lock washer (4) 3100-00-637-9541
Self-locking nut (4) 5310-00-959-7600
Self-locking nut (3) 5310-00-067-4652

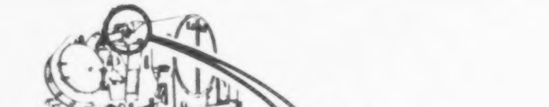
References:
TM 9-1095-205-10
TM 9-1095-205-20

A. TWIN DROP CHUTE ASSEMBLY REMOVAL

NOTE

PRELIMINARY PROCEDURES:
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

1. REMOVE MINE COUNTER COVER FROM OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.
   - Remove three screws (1), washers (2), and cover (3) from outfeed chute and mine counting assembly (4). Use 9/16 inch socket with ratchet handle.



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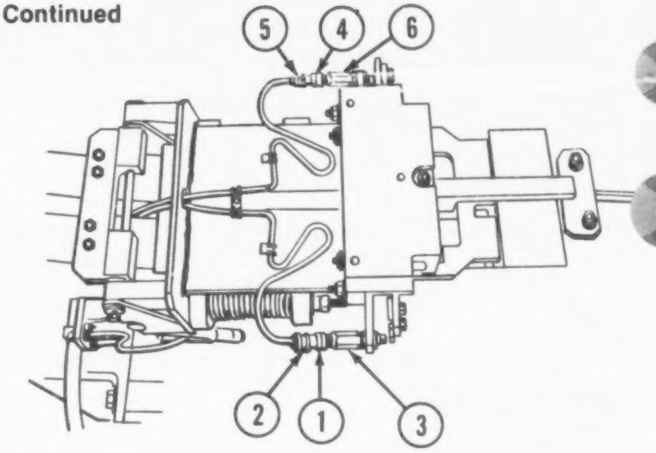
A. TWIN DROP CHUTE ASSEMBLY REMOVAL — Continued

2. DISCONNECT CONNECTORS P27 AND P28 FROM RECEPTACLES J27 AND J28.
   - Tag and mark leads.
   - Turn connector sleeve (1), and disconnect Connector P27 (2) from Receptacle J27 (3).
   - Turn connector sleeve (4), and disconnect Connector P28 (5) from Receptacle J28 (6).



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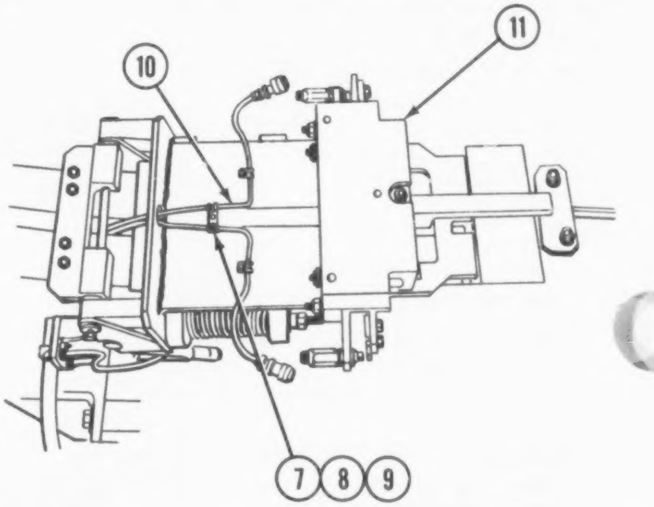
3. REMOVE TWO CABLE ASSEMBLIES AND FOUR CLAMPS FROM OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.
   - Remove three screws (7), lock washers (8) and four clamps (9) with two cable assemblies (10) from outfeed chute and mine counting assembly (11). Use No. 2 cross tip screwdriver. Discard lock washers.
   - Remove four clamps (9) from two cable assemblies (10).



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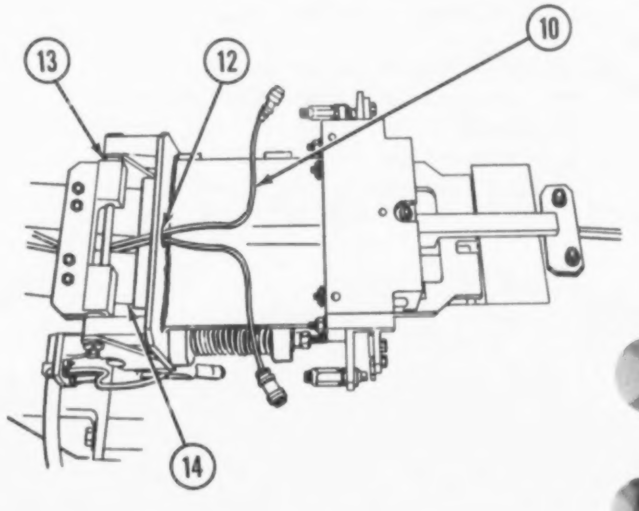
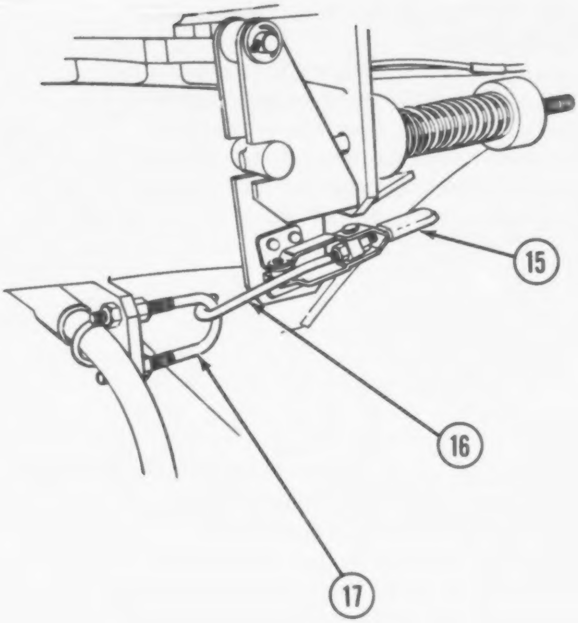
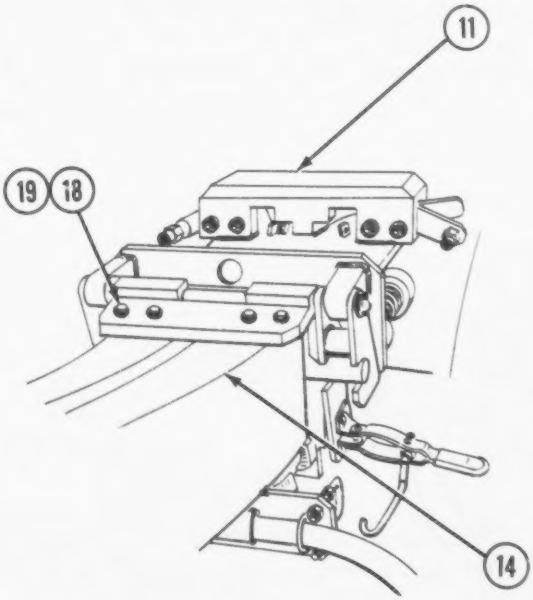
4. REMOVE TWO CABLE ASSEMBLIES FROM OUTFEED CHUTE AND MINE COUNTING ASSEMBLY AND TWIN DROP CHUTE ASSEMBLY.
   - Pull two cable assemblies (10) through outfeed chute weldment hole (12), under pivot block (13), and through twin drop chute assembly (14).



5. RELEASE TWO TOGGLE CLAMP HOOKS FROM TWO U-BOLT ASSEMBLIES.
   - Pull handle (15) outward to release hook (16).
   - Move hook (16) away from U-bolt assembly (17).
   - Repeat above releasing steps for other hook.



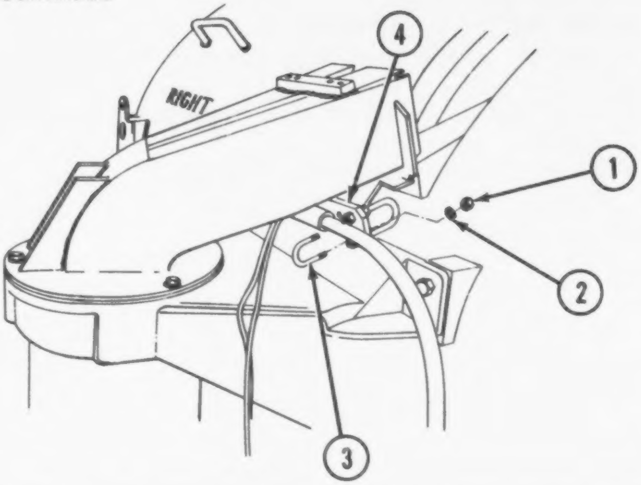
. REMOVE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY FROM TWIN DROP CHUTE ASSEMBLY.
   - Remove four screws (18), lock washers (19), and outfeed chute and mine counting assembly (11) from twin drop chute assembly (14). Use 9/16 inch socket with ratchet handle. Discard lock washers.



GO TO NEXT PAGE

A. TWIN DROP CHUTE ASSEMBLY REMOVAL — Continued

7. REMOVE TWO U-BOLTS FROM TWIN DROP CHUTE ASSEMBLY.
   - Remove two self-locking nuts (1), lock washers (2), and U-bolt (3) from twin drop chute assembly (4). Use 7/16 inch socket with 2 inch extension and ratchet handle. Discard self-locking nuts and lock washers.
   - Repeat above removal step for other U-bolt.



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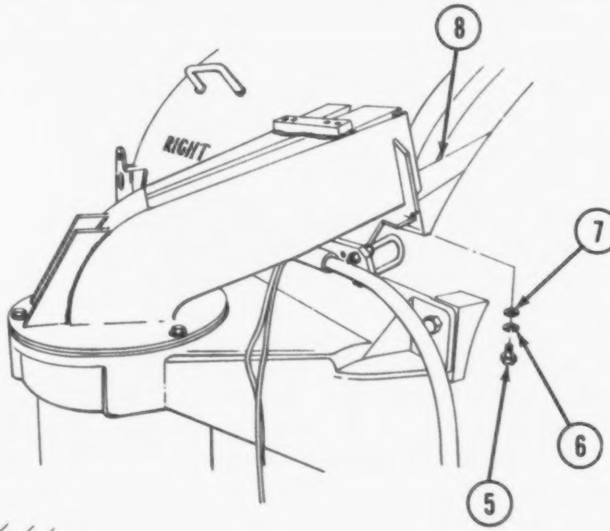
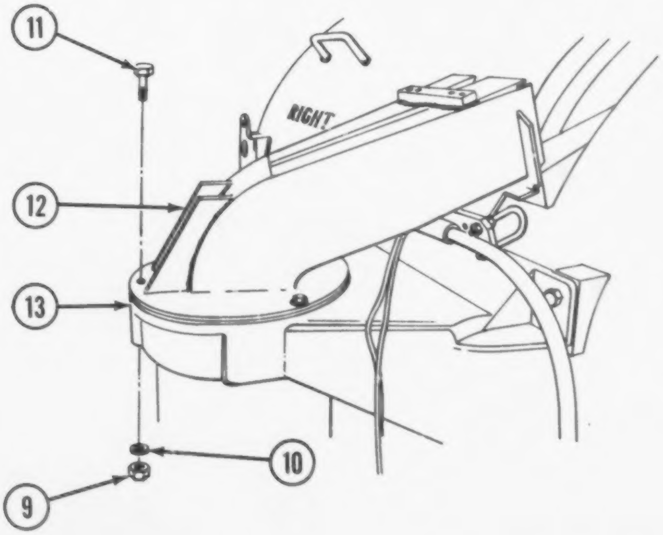
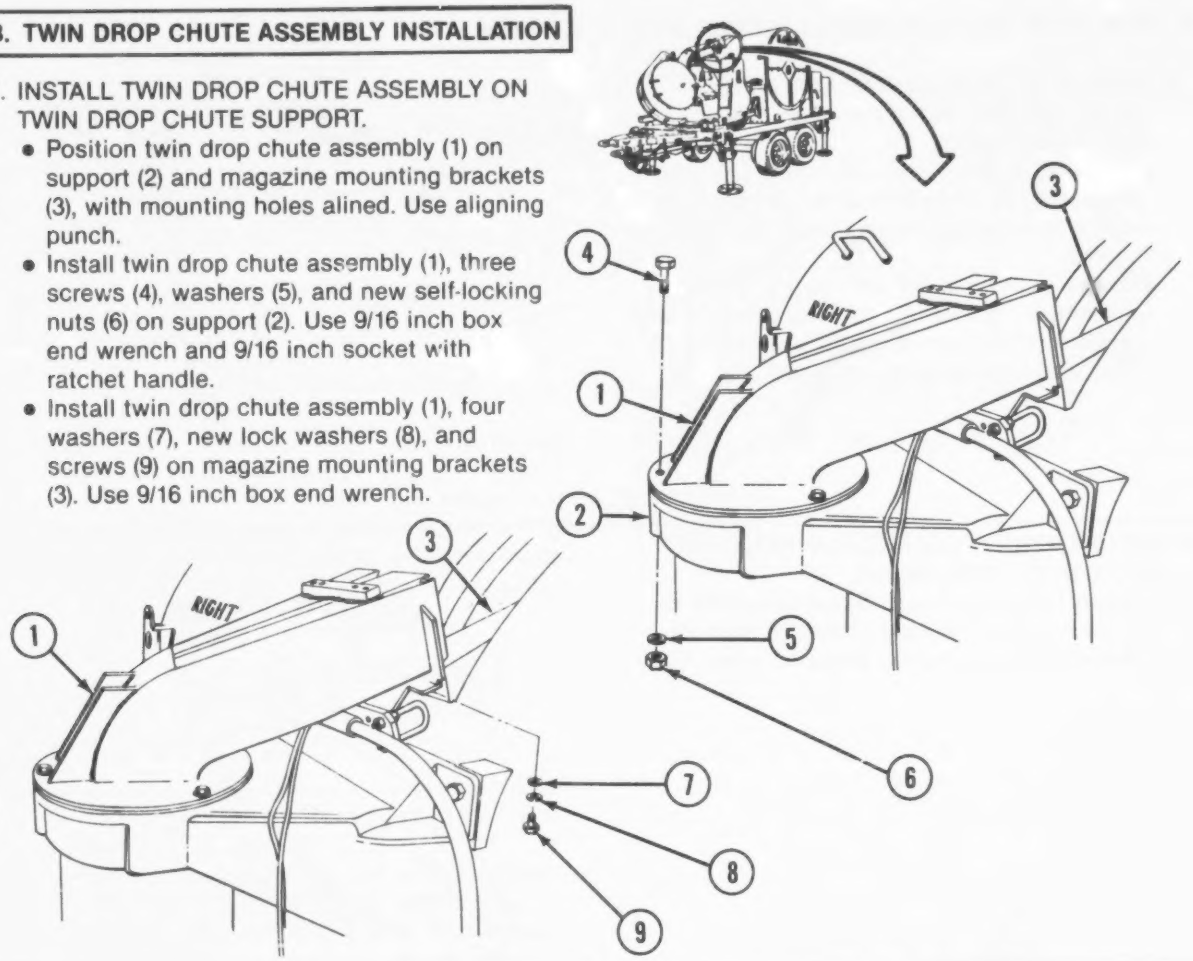
8. REMOVE TWIN DROP CHUTE ASSEMBLY FROM TWIN DROP CHUTE SUPPORT.
   - Remove four screws (5), lock washers (6), and washers (7) from magazine mounting brackets (8). Use 9/16 inch box end wrench. Discard lock washers.
   - Remove three self-locking nuts (9), washers (10), screws (11), and twin drop chute assembly (12) from support (13). Use 9/16 inch box end wrench and 9/16 inch socket with ratchet handle. Discard self-locking nuts.



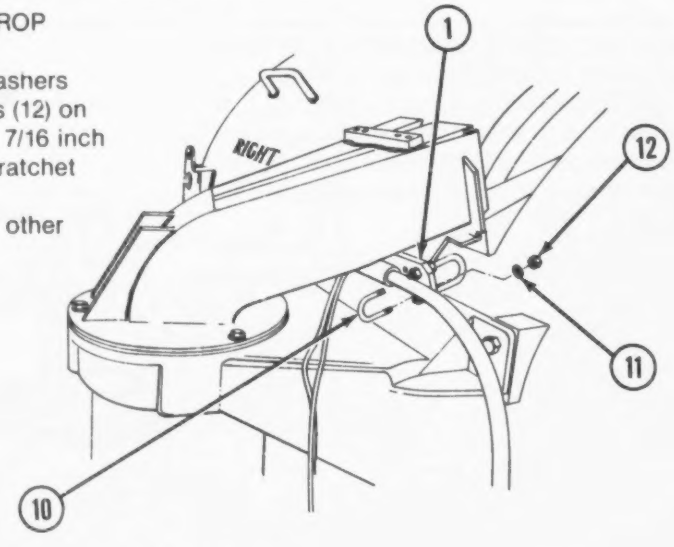


B. TWIN DROP CHUTE ASSEMBLY INSTALLATION

1. INSTALL TWIN DROP CHUTE ASSEMBLY ON TWIN DROP CHUTE SUPPORT.
   - Position twin drop chute assembly (1) on support (2) and magazine mounting brackets (3), with mounting holes alined. Use aligning punch.
   - Install twin drop chute assembly (1), three screws (4), washers (5), and new self-locking nuts (6) on support (2). Use 9/16 inch box end wrench and 9/16 inch socket with ratchet handle.
   - Install twin drop chute assembly (1), four washers (7), new lock washers (8), and screws (9) on magazine mounting brackets (3). Use 9/16 inch box end wrench.



2. INSTALL TWO U-BOLTS ON TWIN DROP CHUTE ASSEMBLY.
   - Install U-bolt (10), two new lock washers (11), and two new self-locking nuts (12) on twin drop chute assembly (1). Use 7/16 inch socket with 2 inch extension and ratchet handle.
   - Repeat above installation step for other U-bolt.



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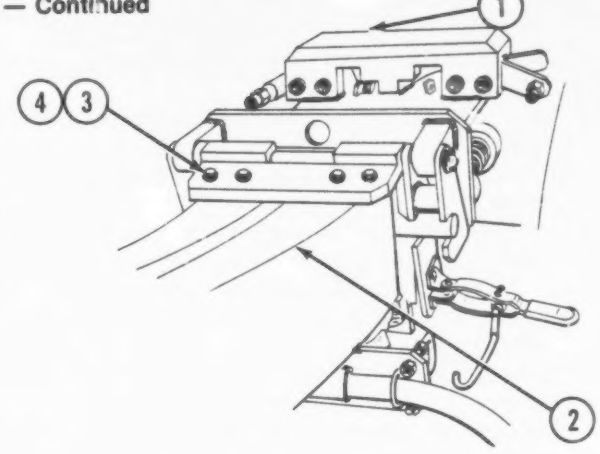
B. TWIN DROP CHUTE ASSEMBLY INSTALLATION — Continued

3. INSTALL OUTFEED CHUTE AND MINE COUNTING ASSEMBLY ON TWIN DROP CHUTE ASSEMBLY.
   - Position outfeed chute and mine counting assembly (1) on twin drop chute assembly (2), with mounting holes alined. Use aligning punch.
   - Install outfeed chute and mine counting assembly (1), four new lock washers (3), and screws (4) on twin drop chute assembly (2). Use 9/16 inch socket with ratchet handle.



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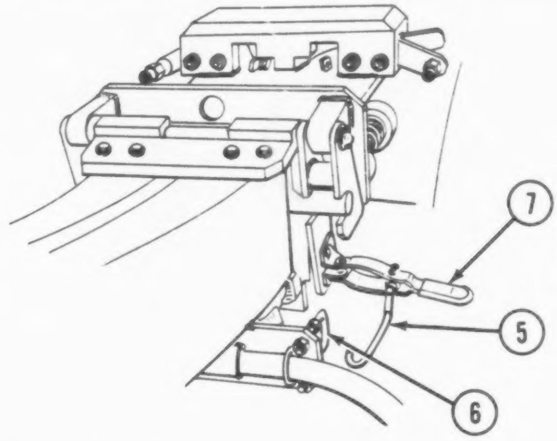
4. SECURE TWO TOGGLE CLAMP HOOKS TO TWO U-BOLT ASSEMBLIES.
   - Insert hook (5) through U-bolt assembly (6).
   - Push handle (7) inward to secure hook (5).
   - Repeat above securing steps for other hook.



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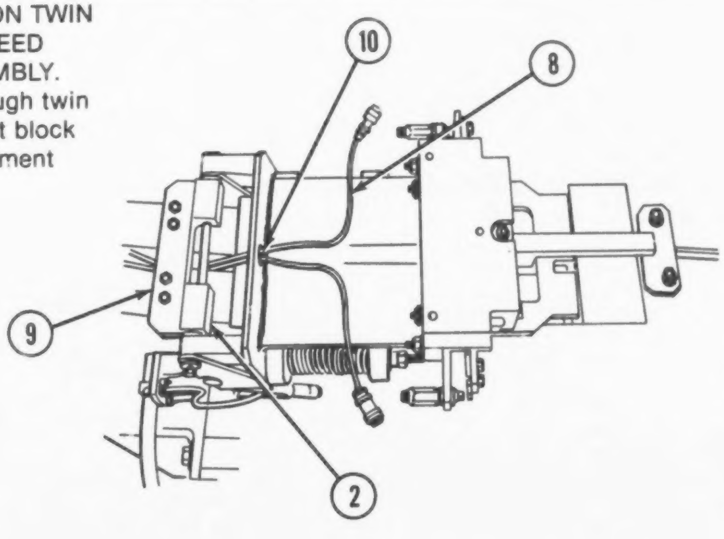
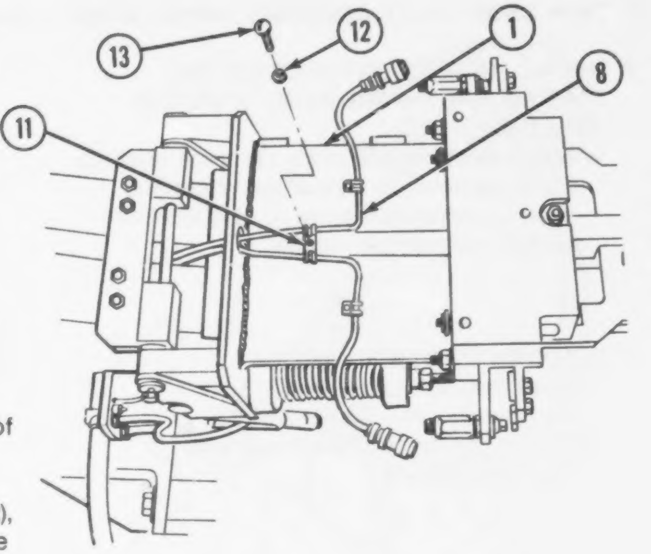
5. INSTALL TWO CABLE ASSEMBLIES ON TWIN DROP CHUTE ASSEMBLY AND OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.
   - Feed two cable assemblies (8) through twin drop chute assembly (2), under pivot block (9), and through outfeed chute weldment hole (10).



CAUTION

Cable assemblies need slack, or they will be damaged when outfeed chute and mine counting assembly is opened. Install cable assemblies with slack when outfeed chute and mine counting assembly is in down position.

6. INSTALL TWO CABLE ASSEMBLIES AND FOUR CLAMPS ON OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.
   - Place four clamps (11) on two cable assemblies (8).
   - Leave 20 in. (50.8 cm) service loop at end of two cable assemblies (8).
   - Install four clamps (11) with two cable assemblies (8), three new lock washers (12), and screws (13) on outfeed chute and mine counting assembly (1). Use No. 2 cross tip screwdriver.



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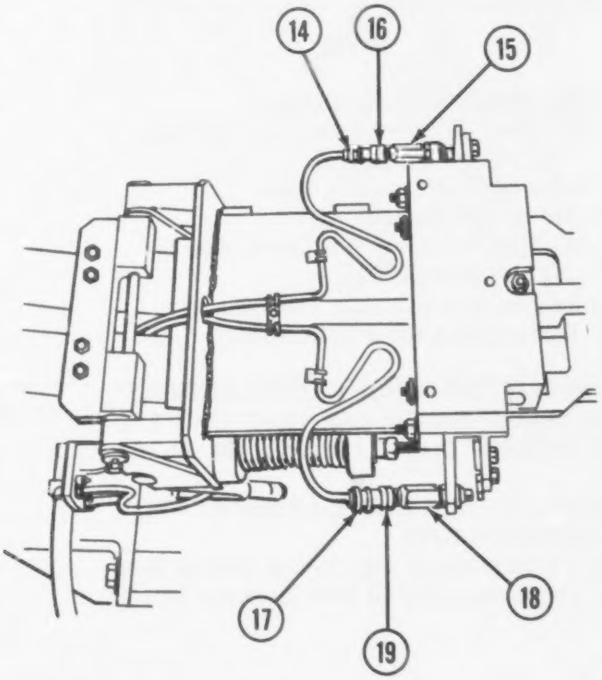
7. CONNECT CONNECTORS P28 AND P27 TO RECEPTACLES J28 AND J27.
   - Connect Connector P28 (14) to Receptacle J28 (15), and turn connector sleeve (16).
   - Connect Connector P27 (17) to Receptacle J27 (18), and turn connector sleeve (19).
   - Remove tags from leads.



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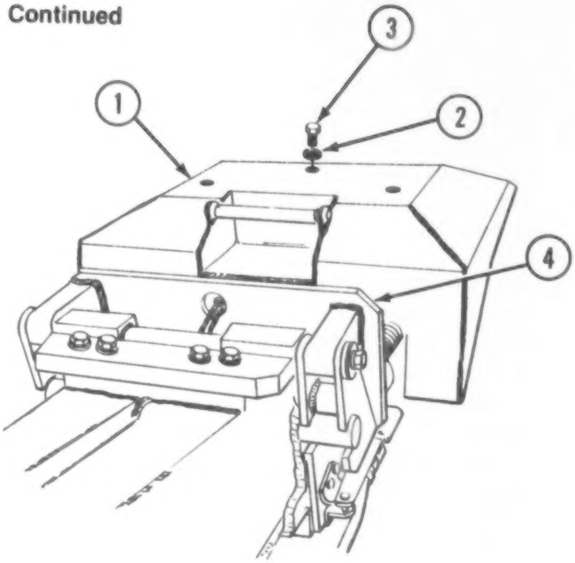
B. TWIN DROP CHUTE ASSEMBLY INSTALLATION — Continued

8. INSTALL MINE COUNTER COVER ON OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.
   - Install mine counter cover (1), three washers (2), and screws (3) on outfeed chute and mine counting assembly (4). Use 9/16 inch socket with ratchet handle.



NOTE

FOLLOW-ON MAINTENANCE:

Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

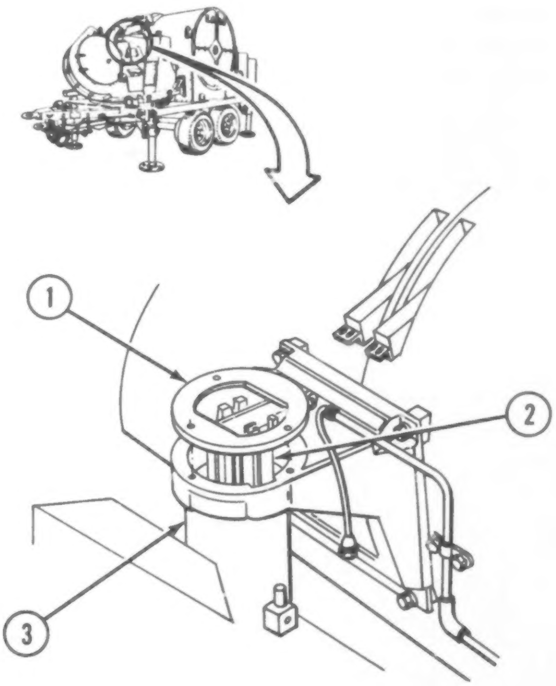
C. TWIST CHUTE ASSEMBLY REMOVAL

NOTE

PRELIMINARY PROCEDURES:

Remove Launcher Wheel And Tire. (See TM 9-1095-205-10.)
Remove Mine Gate Pin. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

1. REMOVE TWIN DROP CHUTE ASSEMBLY FROM DISPENSER. (SEE TWIST CHUTE AND TWIN DROP CHUTE ASSEMBLIES, PAGE 3-3.)
2. REMOVE TWIST CHUTE ASSEMBLY FROM LAUNCHER TUBE.
   - Lift twist chute ring (1), and remove twist chute assembly (2) from launcher tube (3).



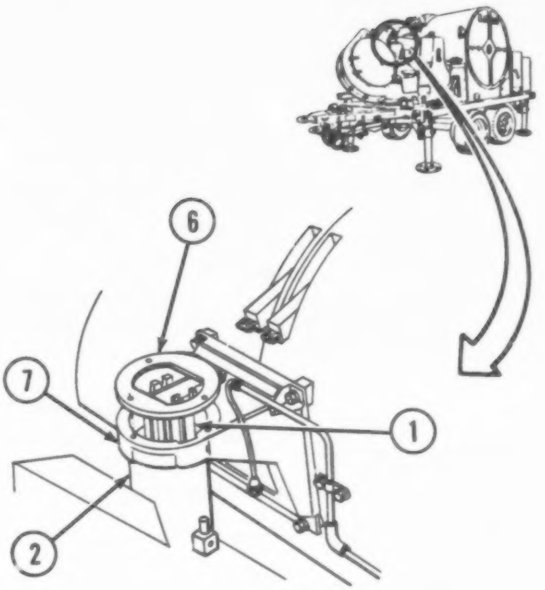
D. TWIST CHUTE ASSEMBLY INSTALLATION

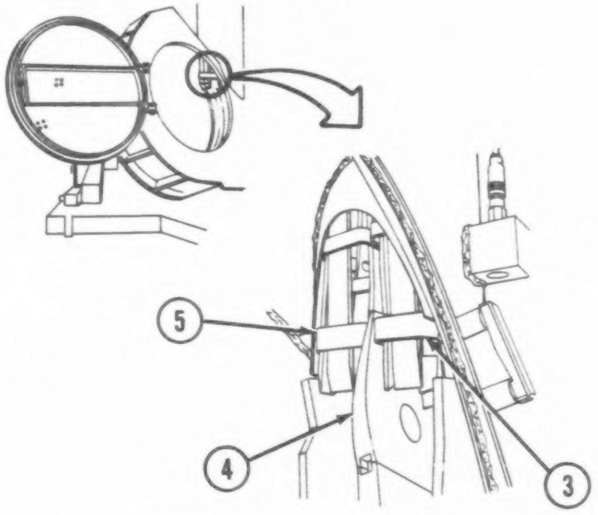
1. INSTALL TWIST CHUTE ASSEMBLY IN LAUNCHER TUBE.
   - Insert twist chute assembly (1) in launcher tube (2).
   - Position left twist chute (3) to left of center divider (4), and right twist chute (5) to right of center divider.
   - Aline holes in twist chute ring (6) and twin drop chute support (7). Use aligning punch.
2. INSTALL TWIN DROP CHUTE ASSEMBLY ON DISPENSER. (SEE TWIST CHUTE AND TWIN DROP CHUTE ASSEMBLIES, PAGE 3-7.)

NOTE

FOLLOW-ON MAINTENANCE:

Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)
Install Mine Gate Pin. (See TM 9-1095-205-10.)
Install Launcher Wheel And Tire. (See TM 9-1095-205-10.)





END OF TASK

3-5 TWIN DROP CHUTE SUPPORT

DESCRIPTION

This task covers: A. REMOVAL (p 3-13)
B. INSTALLATION (p 3-14)

INITIAL SETUP

Tools and Special Tools:
General mechanic's tool kit
5180-00-177-7033:
3/4 inch socket
5 inch extension
Ratchet handle

Materials/Parts:
Lock washer (4) 5310-00-003-4094
Sealing compound, Item 25, Appendix B

References:
TM 9-1095-205-10
TWIST CHUTE AND TWIN DROP CHUTE ASSEMBLIES, Page 3-3

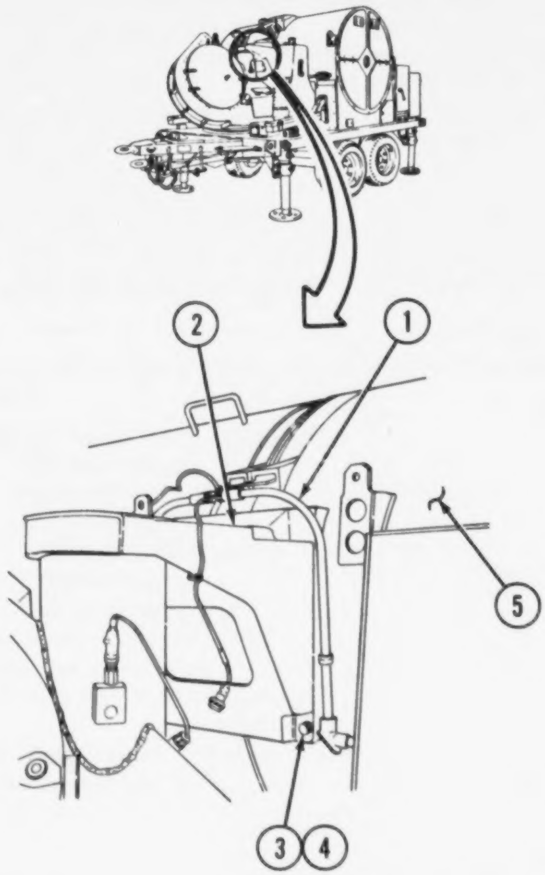
A. REMOVAL

NOTE

PRELIMINARY PROCEDURES:
Remove Launcher Wheel And Tire. (See TM 9-1095-205-10.)
Remove Mine Gate Pin. (See TM 9-1095-205-10.)
Remove Twist Chute And Twin Drop Chute Assemblies. (See Twist Chute and Twin Drop Chute Assemblies, page 3-3.)

REMOVE TWIN DROP CHUTE SUPPORT FROM MAGAZINE.

- Move left conduit (1) away from chute support (2).
- Remove four screws (3), lock washers (4), and chute support (2) from magazine (5). Use 3/4 inch socket with 5 inch extension and ratchet handle. Discard lock washers.



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3-5 TWIN DROP CHUTE SUPPORT—Continued

B. INSTALLATION

INSTALL TWIN DROP CHUTE SUPPORT ON MAGAZINE.

- Position twin drop chute support (1) on magazine (2) with mounting holes alined.
- Install four new lock washers (3) and screws (4) on chute support (1). Use 3/4 inch socket with 5 inch extension and ratchet handle.
- Apply sealing compound around connector (5) of left conduit (6), and move left conduit over chute support (1).

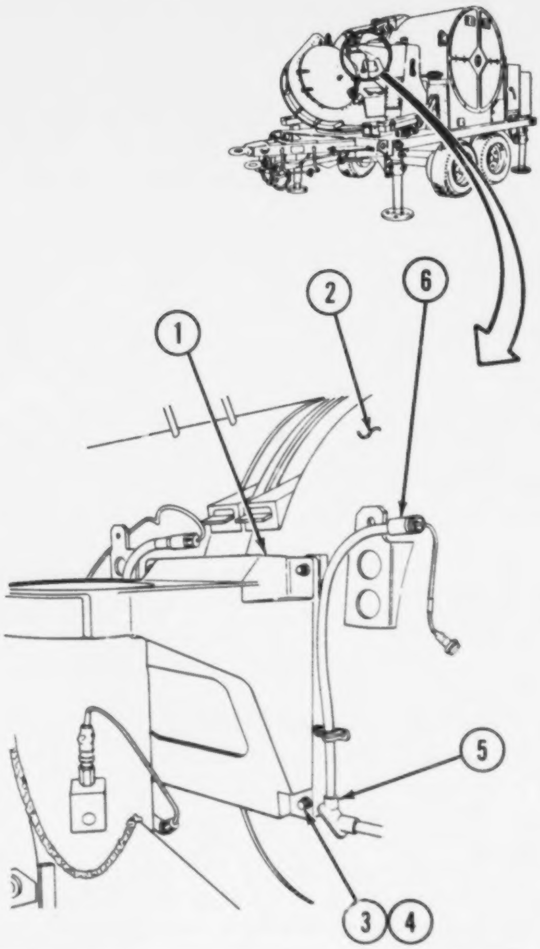
NOTE

FOLLOW-ON MAINTENANCE:

Install Twist Chute And Twin Drop Chute Assemblies. (See Twist Chute and Twin Drop Chute Assemblies, Page 3-3.)

Install Mine Gate Pin. (See TM 9-1095-205-10.)

Install Launcher Wheel And Tire. (See TM 9-1095-205-10.)



END OF TASK

3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY

DESCRIPTION

This task covers:

A. MINE COUNTER COVER REMOVAL (p 3-16)
B. MINE COUNTER COVER INSTALLATION (p 3-16)
C. OUTPUT PROXIMITY SENSORS REMOVAL (p 3-17)
D. OUTPUT PROXIMITY SENSORS INSTALLATION (p 3-18)
E. MINE COUNTER BLOCK REMOVAL (p 3-20)
F. MINE COUNTER BLOCK INSTALLATION (p 3-23)
G. CAM FOLLOWERS REMOVAL (p 3-25)
H. CAM FOLLOWERS INSTALLATION (p 3-26)
I. CAM ARMS REMOVAL (p 3-27)
J. CAM ARMS INSTALLATION (p 3-28)
K. PIVOT ARMS REMOVAL (p 3-29)
L. PIVOT ARMS INSTALLATION (p 3-30)
M. OUTPUT PROXIMITY SENSOR PADS REMOVAL (p 3-32)
N. OUTPUT PROXIMITY SENSOR PADS INSTALLATION (p 3-33)
O. OUTPUT PROXIMITY SENSOR ARMS REMOVAL (p 3-34)
P. OUTPUT PROXIMITY SENSOR ARMS INSTALLATION (p 3-35)
Q. TOGGLE CLAMPS REMOVAL (p 3-36)
R. TOGGLE CLAMPS INSTALLATION (p 3-37)
S. U-BOLT ASSEMBLIES REMOVAL (p 3-38)
T. U-BOLT ASSEMBLIES INSTALLATION (p 3-38)
U. OUTFEED CHUTE SPRINGS REMOVAL (p 3-39)
V. OUTFEED CHUTE SPRINGS INSTALLATION (p 3-40)
W. OUTFEED CHUTE WELDMENT REMOVAL (p 3-41)
X. OUTFEED CHUTE WELDMENT INSTALLATION (p 3-44)
Y. PILOT BLOCK REMOVAL (p 3-47)
Z. PILOT BLOCK INSTALLATION (p 3-47)
AA. OUTPUT PROXIMITY SENSOR ARMS ADJUSTMENT (p 3-48)

INITIAL SETUP

Tools and Special Tools:

General mechanic's tool kit
  5180-00-177-7033:
    3/8 inch box end wrench
    13/16 inch box end wrench
    9/16 inch box end wrench
    3/4 inch box end wrench
    9/16 inch open end wrench
    13/16 inch open end wrench
    3/4 inch open end wrench
    7/16 inch socket
    9/16 inch socket
    No. 2 cross tip screwdriver
    6 inch steel rule

Tools and Special Tools — Continued

    Slip joint pliers
    Ratchet handle
    Round nose pliers
    Diagonal cutting pliers
    Thickness gage
    Ball peen hammer
Goggles 4240-00-269-7912
Practice mine M79
14 inch X 7/16 inch steel rod,
, Appendix C
Cutting and welding torch outfit
  3433-00-357-8116

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INITIAL SETUP — Continued

Materials/Parts:
Grease, Item 11, Appendix B
Lock washer (9) 5310-00-637-9541
Lock washer (4) 5310-00-045-3296
Lock washer (3) 5310-00-579-5752
Cotter pin (4) 5315-00-816-1794
Safety wire, Item 24, Appendix B
Self-locking nut 5310-00-087-4652
Flint abrasive paper, Item 8, Appendix B

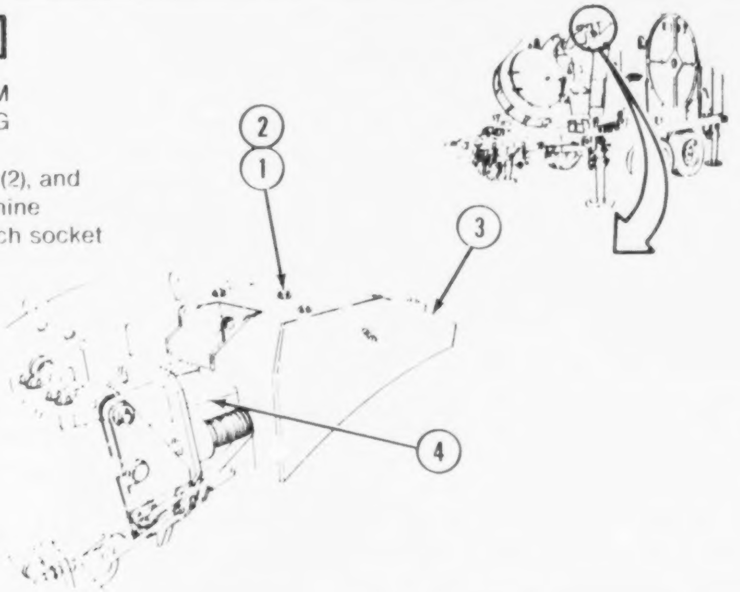
Personnel Required:
Mechanic
Helper

References:
TM 9-1095-205-10
TM 9-1095-205-20

A. MINE COUNTER COVER REMOVAL

REMOVE MINE COUNTER COVER FROM OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.

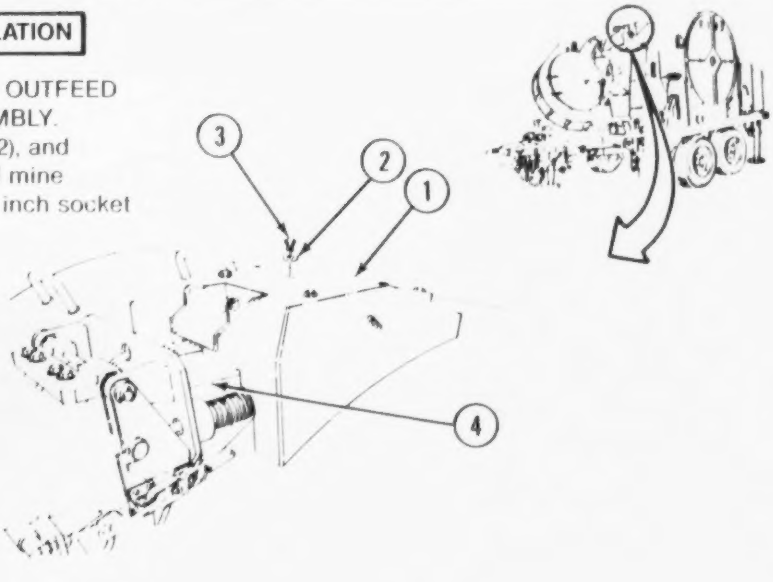
- Remove three screws (1), washers (2), and cover (3) from outfeed chute and mine counting assembly (4). Use 9/16 inch socket with ratchet handle.



B. MINE COUNTER COVER INSTALLATION

INSTALL MINE COUNTER COVER ON OUTFEED CHUTE AND MINE COUNTING ASSEMBLY.

- Install cover (1), three washers (2), and screws (3) on outfeed chute and mine counting assembly (4). Use 9/16 inch socket with ratchet handle.



C. OUTPUT PROXIMITY SENSORS REMOVAL

NOTE

PRELIMINARY PROCEDURES:
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)
Swing Launcher To Far Right. (See TM 9-1095-205-10.)

NOTE

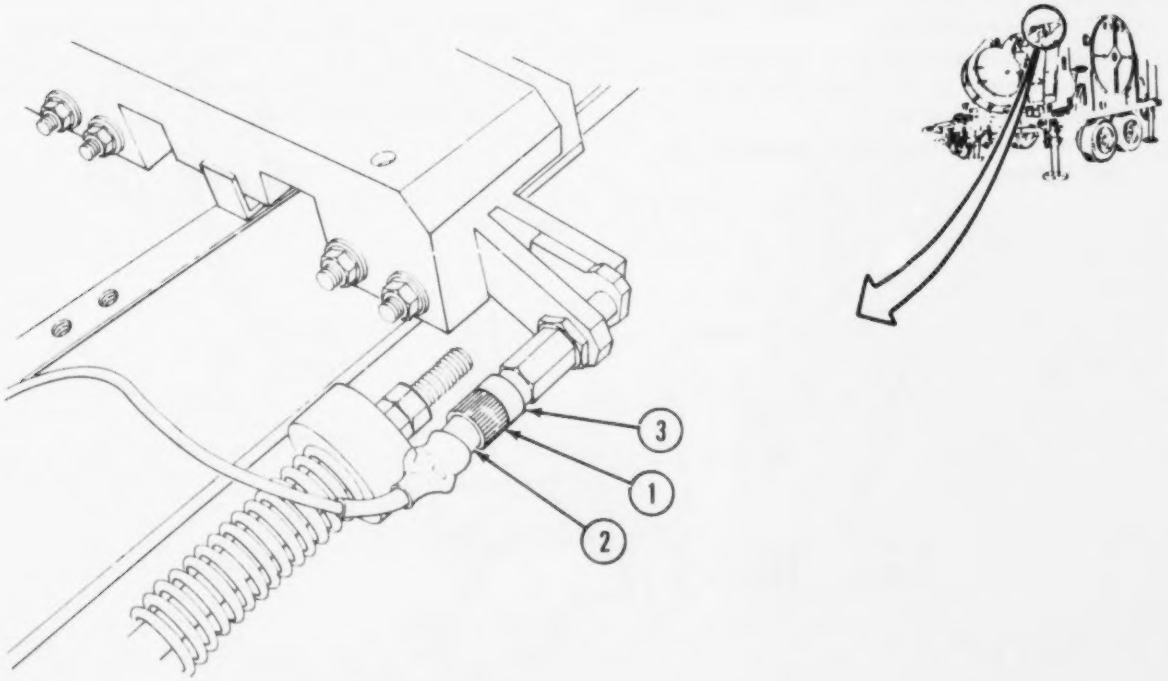
Left and right output proximity sensors are removed the same way. This procedure shows left output proximity sensor.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

The P27/J27 and P28/J28 output proximity sensor connections are disconnected the same way. Step 2 shows P27/J27.

2. DISCONNECT CONNECTOR P27 FROM RECEPTACLE J27.
   - Tag and mark leads.
   - Turn connector sleeve (1), and disconnect Connector P27 (2) from Receptacle J27 (3).



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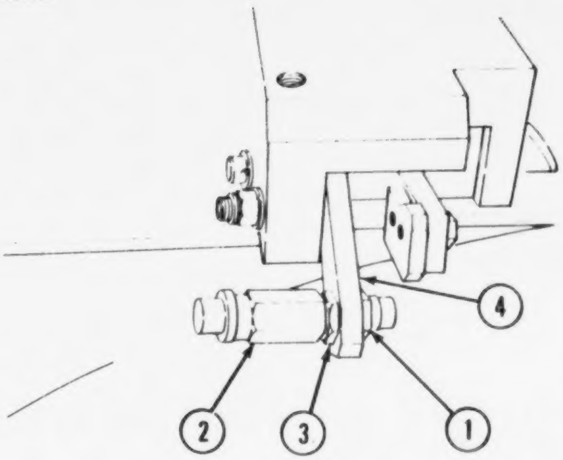
C. OUTPUT PROXIMITY SENSORS REMOVAL — Continued

3. REMOVE LEFT OUTPUT PROXIMITY SENSOR FROM LEFT SENSOR ARM.
   - Remove outer jam nut (1) from sensor (2). Use 13/16 inch box end wrench.
   - Loosen inner jam nut (3) on sensor (2). Use 13/16 inch open end wrench.
   - Remove sensor (2) from sensor arm (4). Use 3/4 inch box end wrench.
   - Remove inner jam nut (3) from sensor (2).

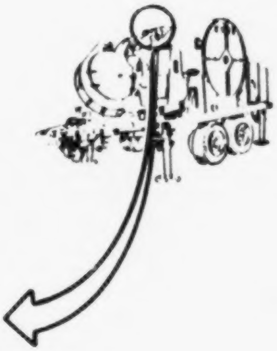


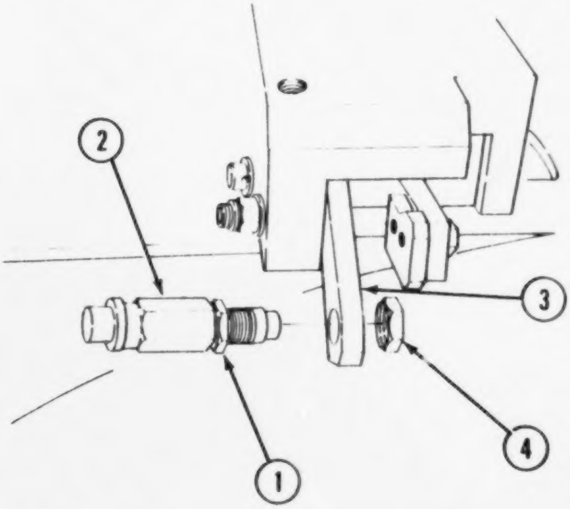
D. OUTPUT PROXIMITY SENSORS INSTALLATION

NOTE

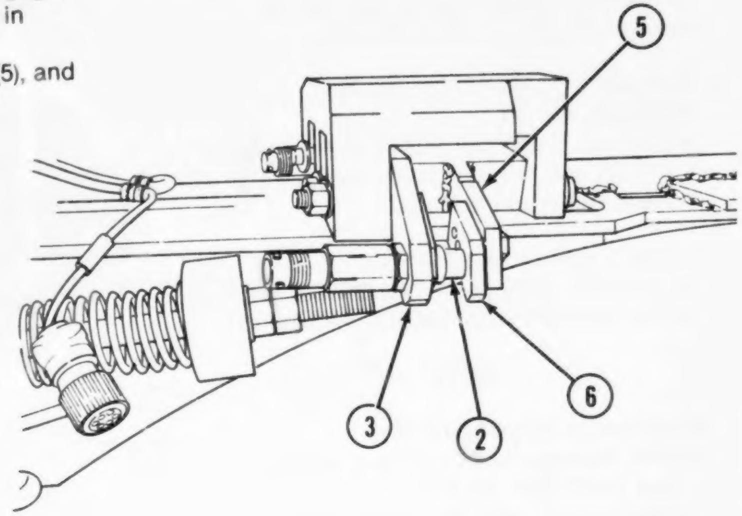
Left and right output proximity sensors are installed the same way. This procedure shows left output proximity sensor.

1. INSTALL LEFT OUTPUT PROXIMITY SENSOR ON LEFT SENSOR ARM.
   - Install inner jam nut (1) on sensor (2).
   - Install sensor (2) on sensor arm (3). Do not tighten inner jam nut.
   - Install outer jam nut (4) on sensor (2). Do not tighten.





2. SET LEFT OUTPUT PROXIMITY SENSOR GAP.
   - Push down and hold pivot arm (5).
   - Measure gap between face of sensor (2) and sensor pad (6). Gap should be 0.060 — 0.090 in. (1.52 — 2.27 mm). Use thickness gage.
   - If gap is not correct, turn sensor (2) in sensor arm (3) to correct gap.
   - If gap is correct, release pivot arm (5), and tighten two jam nuts on left output proximity sensor. (See next step.)



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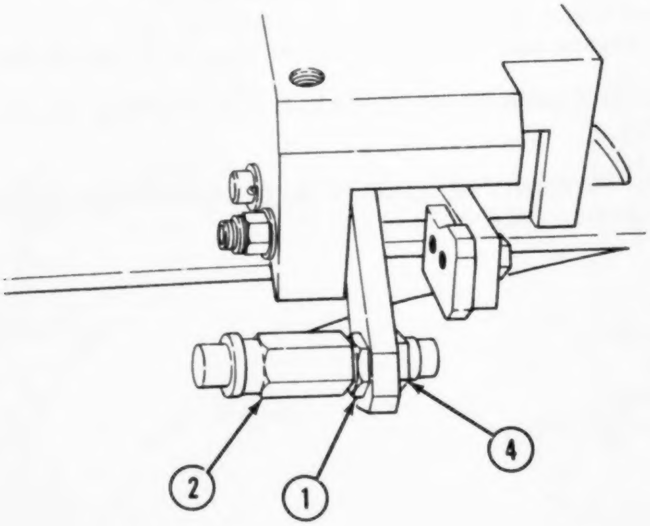
3. TIGHTEN TWO JAM NUTS ON LEFT OUTPUT PROXIMITY SENSOR.
   - Tighten outer jam nut (4) and inner jam nut (1) on sensor (2). Use 13/16 inch open end wrench.



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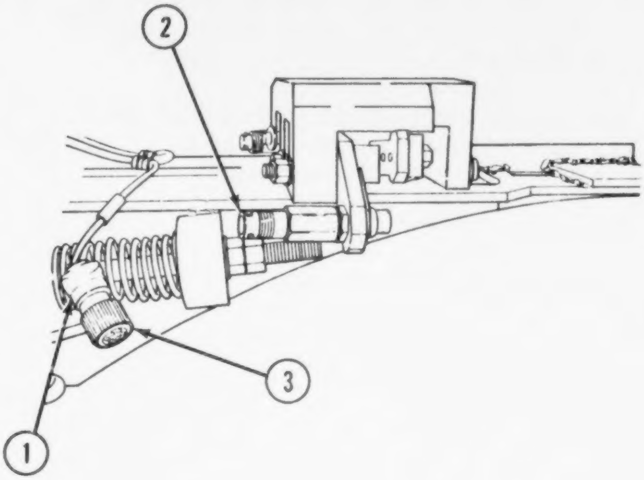
D. OUTPUT PROXIMITY SENSORS INSTALLATION — Continued

NOTE

The P27/J27 and P28/J28 output proximity sensor connections are connected the same way. Step 4 shows P27/J27.

4. CONNECT CONNECTOR P27 TO RECEPTACLE J27.
   - Connect Connector P27 (1) to Receptacle J27 (2), and turn connector sleeve (3).
   - Remove tags from leads.
5. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)



NOTE

FOLLOW-ON MAINTENANCE:

Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

E. MINE COUNTER BLOCK REMOVAL

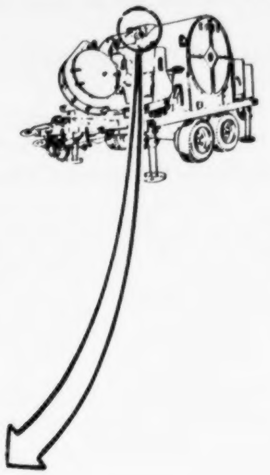
NOTE

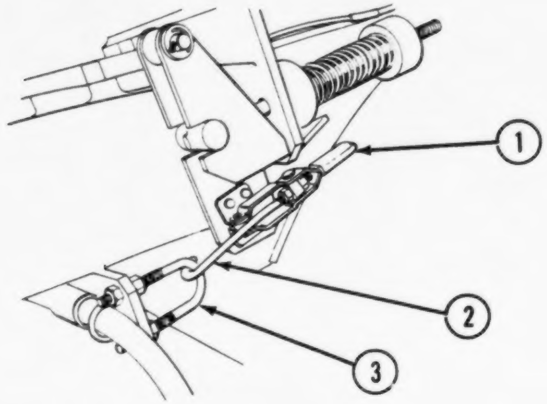
PRELIMINARY PROCEDURES:

Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)
2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)

3. RELEASE TWO TOGGLE CLAMP HOOKS FROM U-BOLT ASSEMBLIES.
   - Pull toggle clamp handle (1) outward, and release hook (2) from U-bolt assembly (3).
   - Repeat above release step for other hook.





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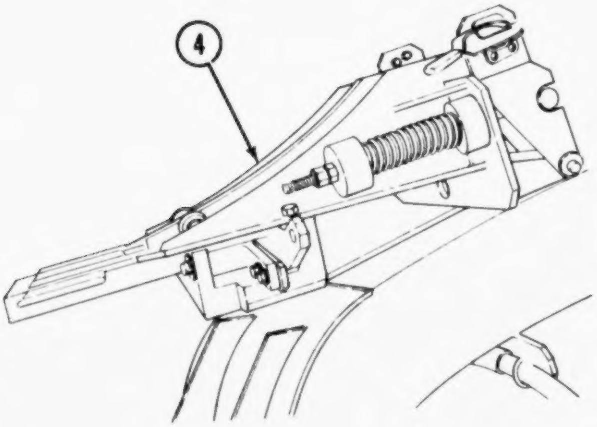
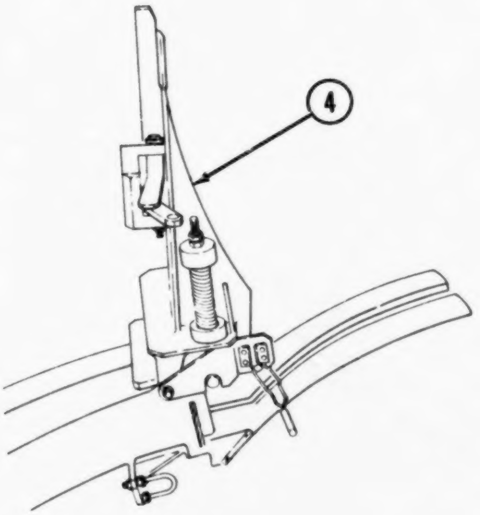
4. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (4).





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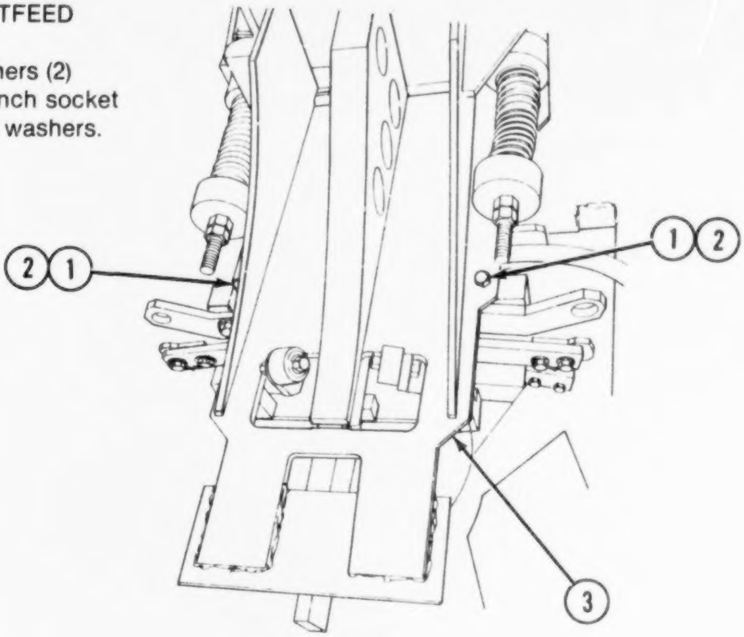
E. MINE COUNTER BLOCK REMOVAL — Continued

5. REMOVE TWO SCREWS FROM OUTFEED CHUTE.
   - Remove screws (1) and lock washers (2) from outfeed chute (3). Use 9/16 inch socket with ratchet handle. Discard lock washers.



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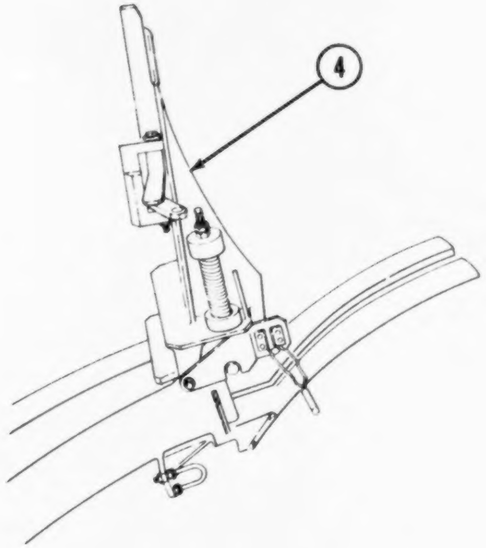
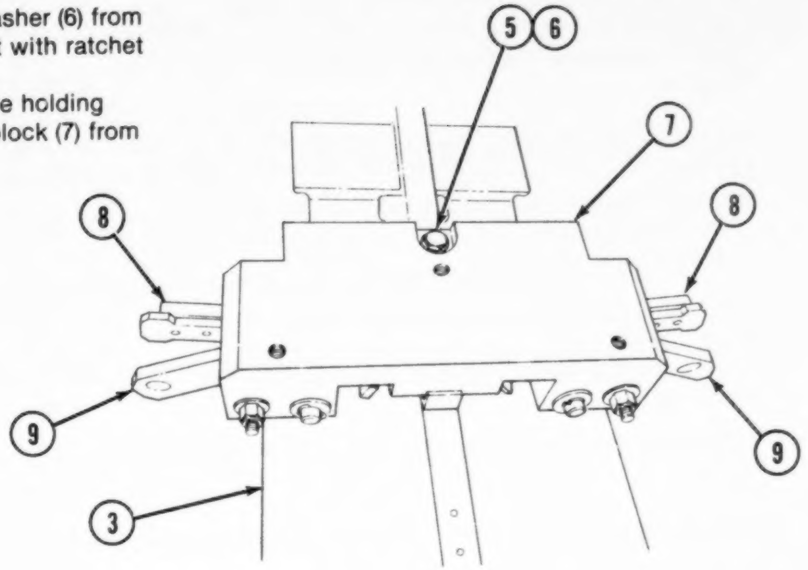
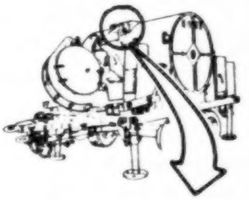
6. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY (4).



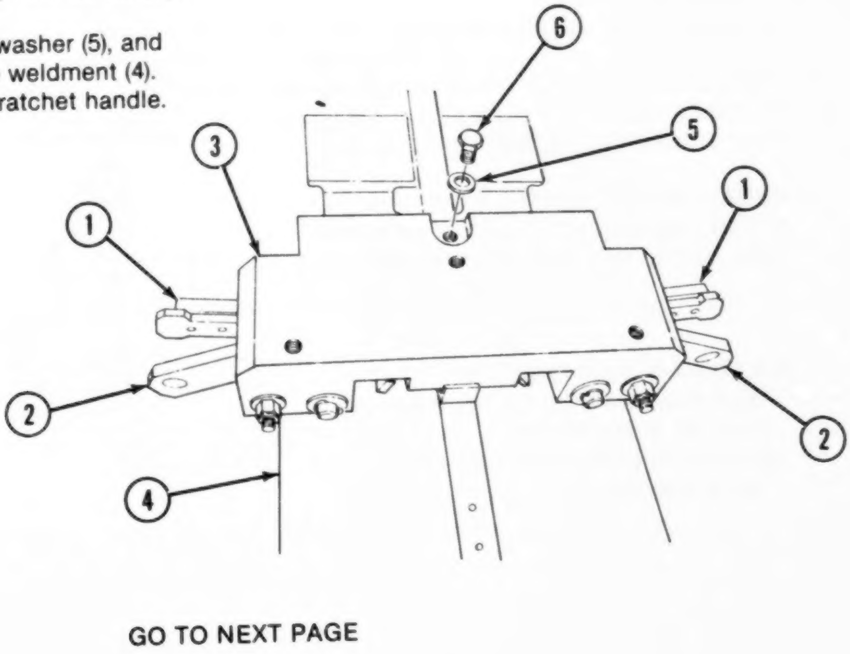
7. REMOVE MINE COUNTER BLOCK FROM OUTFEED CHUTE WELDMENT.
   - Remove screw (5) and lock washer (6) from block (7). Use 9/16 inch socket with ratchet handle. Discard lock washer.
   - Push down pivot arms (8) while holding sensor arms (9), and remove block (7) from outfeed chute weldment (3).



F. MINE COUNTER BLOCK INSTALLATION



1. INSTALL MINE COUNTER BLOCK ON OUTFEED CHUTE WELDMENT.
   - Press down pivot arms (1) while lifting sensor arms (2), and position block (3) on outfeed chute weldment (4) with mounting holes alined.
   - Install block (3), new lock washer (5), and screw (6) on outfeed chute weldment (4). Use 9/16 inch socket with ratchet handle.



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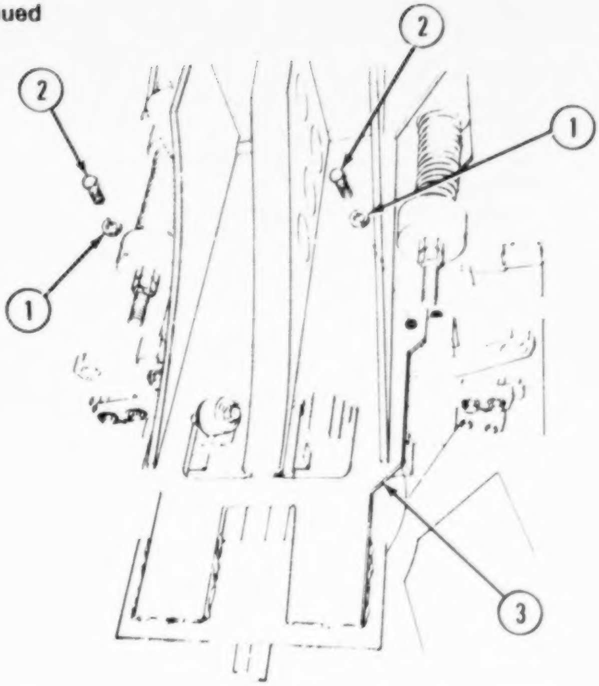
F. MINE COUNTER BLOCK INSTALLATION — Continued



2. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)

3. INSTALL TWO SCREWS ON OUTFEED CHUTE.
   - Install new lock washers (1) and screws (2) on outfeed chute (3). Use 9/16 inch socket with ratchet handle.

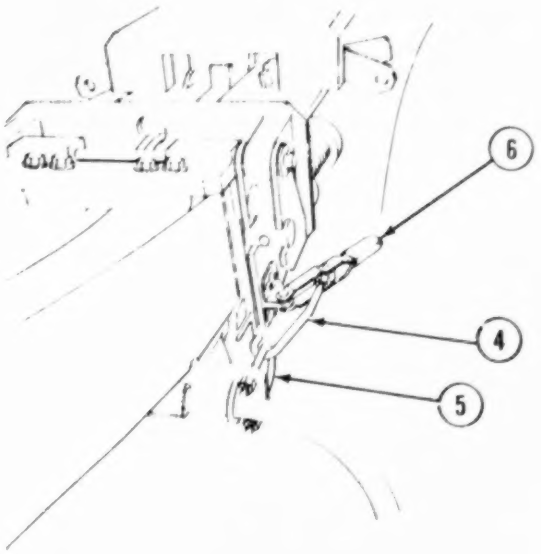
4. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)

---

5. SECURE TWO TOGGLE CLAMP HOOKS TO U-BOLT ASSEMBLIES.
   - Attach hook (4) to U-bolt assembly (5).
   - Push toggle clamp handle (6) inward to secure hook (4).
   - Repeat above securing steps for other hook.

6. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)

7. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)



NOTE

FOLLOW-ON MAINTENANCE:
Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-20.)

G. CAM FOLLOWERS REMOVAL

NOTE

PRELIMINARY PROCEDURES:

Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

NOTE

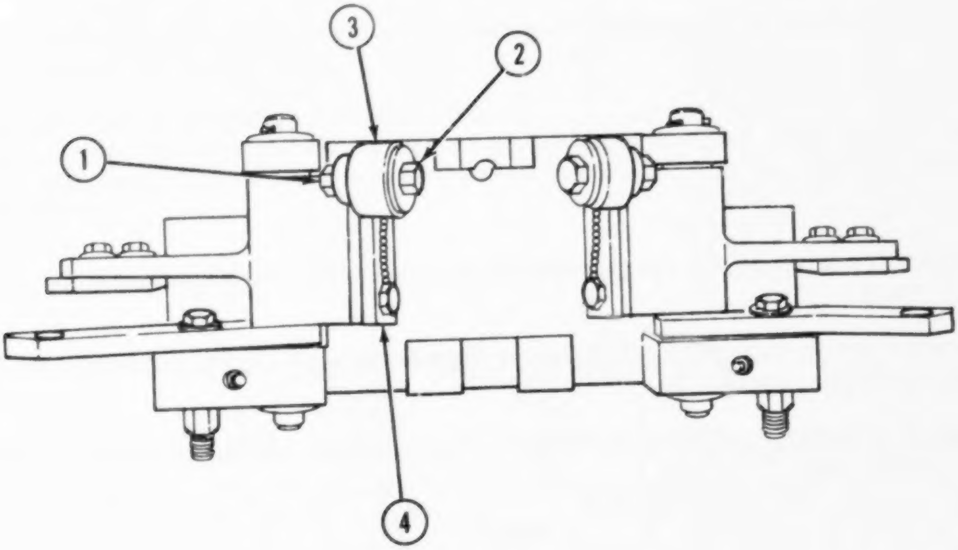
Left and right cam followers are removed the same way. This procedure shows left cam follower.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)

3. REMOVE MINE COUNTER BLOCK FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-20.)

4. REMOVE LEFT CAM FOLLOWER FROM LEFT CAM ARM.
   - Remove nut (1) from screw (2). Use 9/16 inch open end wrench.
   - Remove screw (2) and cam follower (3) from cam arm (4). Use 9/16 inch box end wrench.



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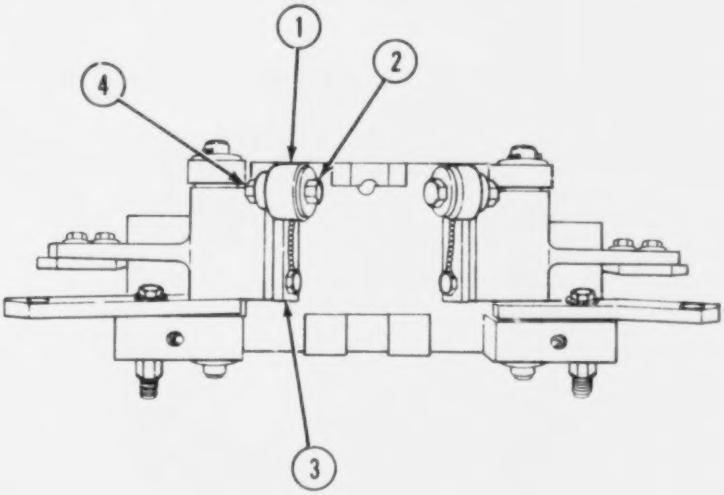
3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

H. CAM FOLLOWERS INSTALLATION

NOTE

Left and right cam followers are installed the same way. This procedure shows left cam follower.

1. INSTALL LEFT CAM FOLLOWER ON LEFT CAM ARM.
   - Install cam follower (1) and screw (2) on cam arm (3). Use 9/16 inch box end wrench.
   - Install nut (4) on screw (2). Use 9/16 inch open end wrench.



2. INSTALL MINE COUNTER BLOCK ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-23.)
3. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)
4. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

FOLLOW-ON MAINTENANCE:

Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

I. CAM ARMS REMOVAL

NOTE

PRELIMINARY PROCEDURES:

Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

NOTE

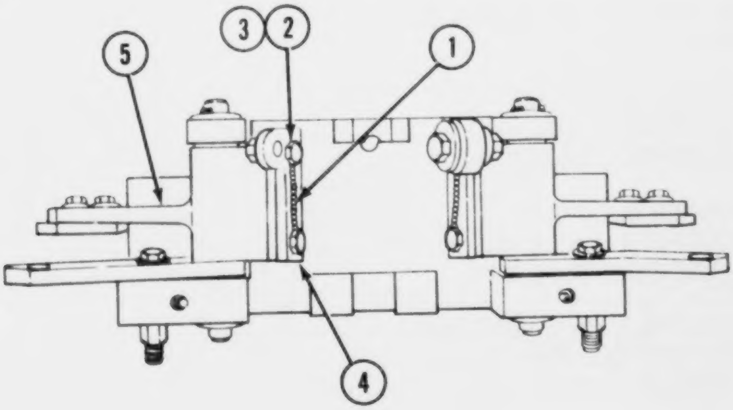
Left and right cam arms are removed the same way. This procedure shows left cam arm.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)
2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)
3. REMOVE MINE COUNTER BLOCK FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-20.)
4. REMOVE LEFT CAM FOLLOWER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-25.)

WARNING

Flying bits of metal can blind you. Always wear goggles when you cut metal or use power tools.

5. REMOVE LEFT CAM ARM FROM LEFT PIVOT ARM.
   - Cut and remove safety wire (1) from two screws (2). Use diagonal cutting pliers. Discard safety wire.
   - Remove two screws (2), washers (3), and cam arm (4) from pivot arm (5). Use 7/16 inch socket with ratchet handle.



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3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

J. CAM ARMS INSTALLATION

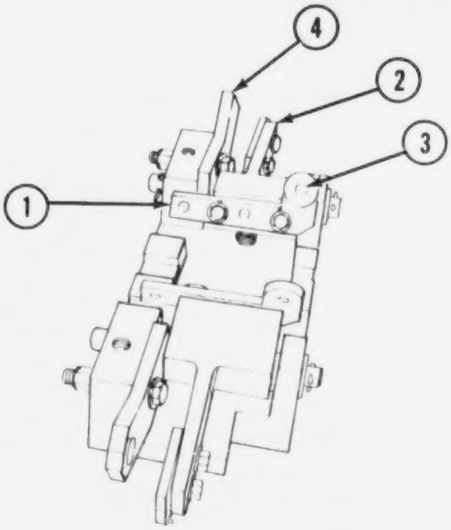
WARNING

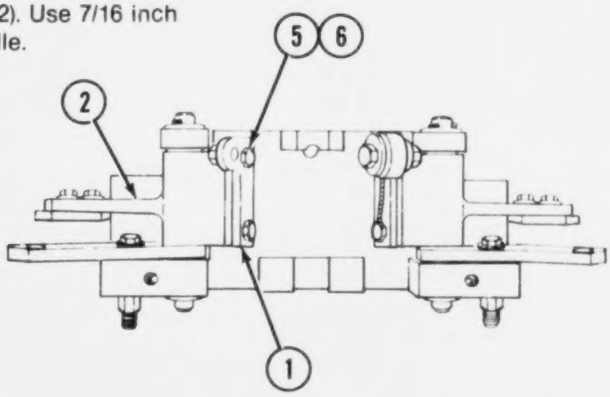
Flying bits of metal can blind you. Always wear goggles when you cut metal or use power tools.

NOTE

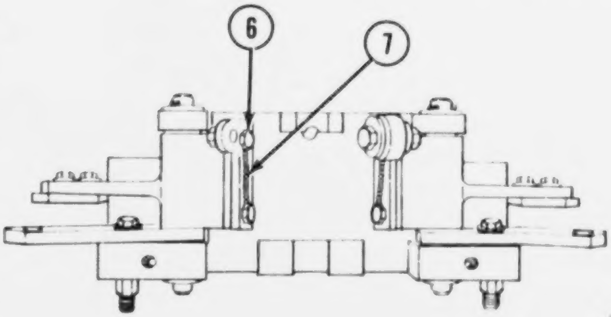
Left and right cam arms are installed the same way. This procedure shows left cam arm.

1. INSTALL LEFT CAM ARM ON LEFT PIVOT ARM.
   - Position cam arm (1) on pivot arm (2) with threaded hole (3) away from sensor arm (4).
   - Install cam arm (1), two washers (5), and screws (6) on pivot arm (2). Use 7/16 inch socket with ratchet handle.





   - Install new safety wire (7) on two screws (6). Use slip joint pliers.



2. INSTALL LEFT CAM FOLLOWER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-26.)
3. INSTALL MINE COUNTER BLOCK ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-23.)
4. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)
5. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

FOLLOW-ON MAINTENANCE:

Install Battery Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

K. PIVOT ARMS REMOVAL

NOTE

PRELIMINARY PROCEDURES:

Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-20.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

NOTE

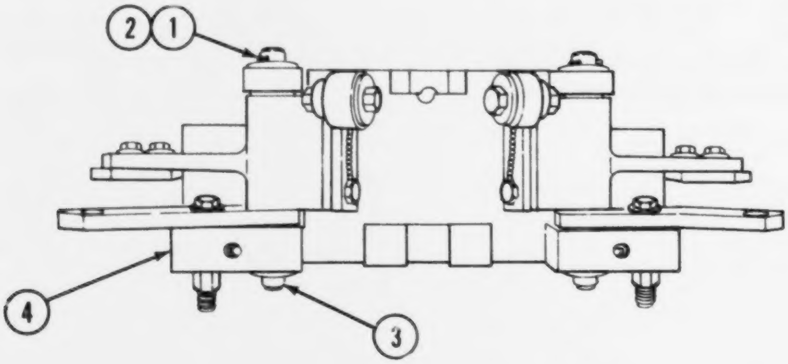
Left and right pivot arms are removed the same way. This procedure shows left pivot arm. If you replace both left and right pivot arms, you must double the pivot arm parts listed in Initial Setup.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)

3. REMOVE MINE COUNTER BLOCK FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-20.)

4. REMOVE LEFT SHAFT FROM MINE COUNTER BLOCK.
   - Remove two cotter pins (1) and washers (2) from shaft (3). Use round nose pliers. Discard cotter pins.
   - Remove shaft (3) from block (4).



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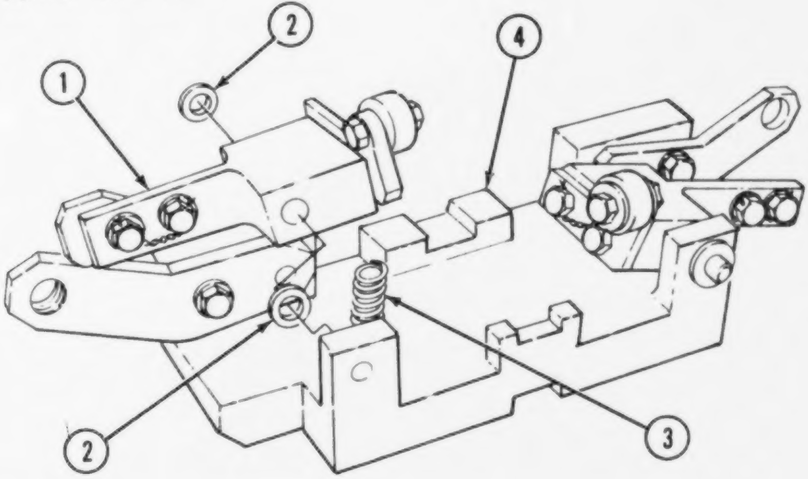
K. PIVOT ARMS REMOVAL — Continued

5. REMOVE LEFT PIVOT ARM FROM MINE COUNTER BLOCK.
   - Remove pivot arm (1), thrust washers (2), and spring (3) from block (4).

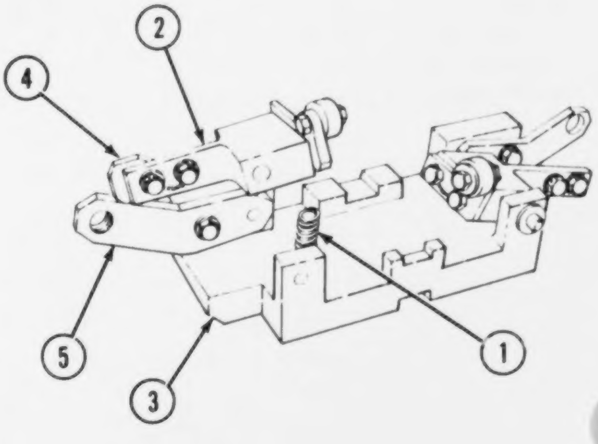


L. PIVOT ARMS INSTALLATION

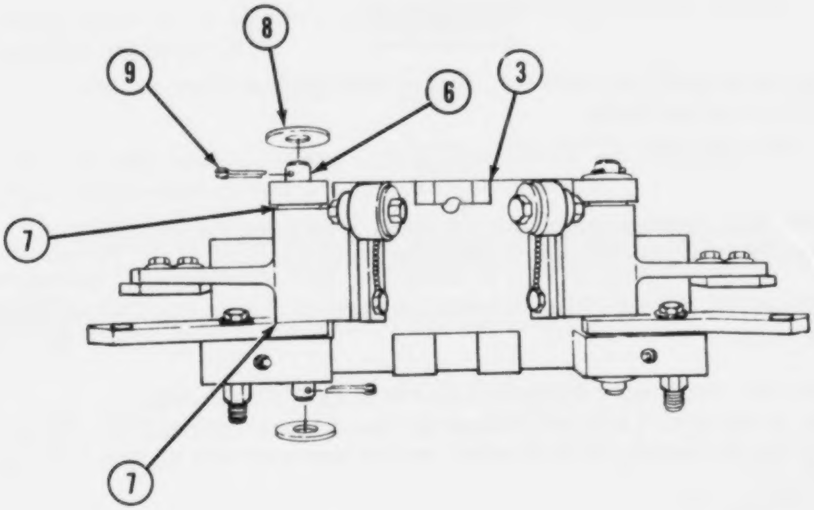
NOTE

Left and right pivot arms are installed the same way. This procedure shows left pivot arm. If you replace both left and right pivot arms, you must double the pivot arm parts listed in Initial Setup.

1. INSTALL LEFT PIVOT ARM ON MINE COUNTER BLOCK.
   - Install spring (1) and pivot arm (2) on block (3), with sensor pad (4) facing sensor arm (5).



2. INSTALL LEFT SHAFT ON MINE COUNTER BLOCK.
   - Apply light coat of grease to shaft (6).
   - Install thrust washers (7) and shaft (6) on block (3).
   - Install two washers (8) and new cotter pins (9) on shaft (6). Use round nose pliers.



3. INSTALL MINE COUNTER BLOCK ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-23.)

4. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)

5. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

FOLLOW-ON MAINTENANCE:

Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

GO TO NEXT PAGE

3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

M. OUTPUT PROXIMITY SENSOR PADS REMOVAL

WARNING

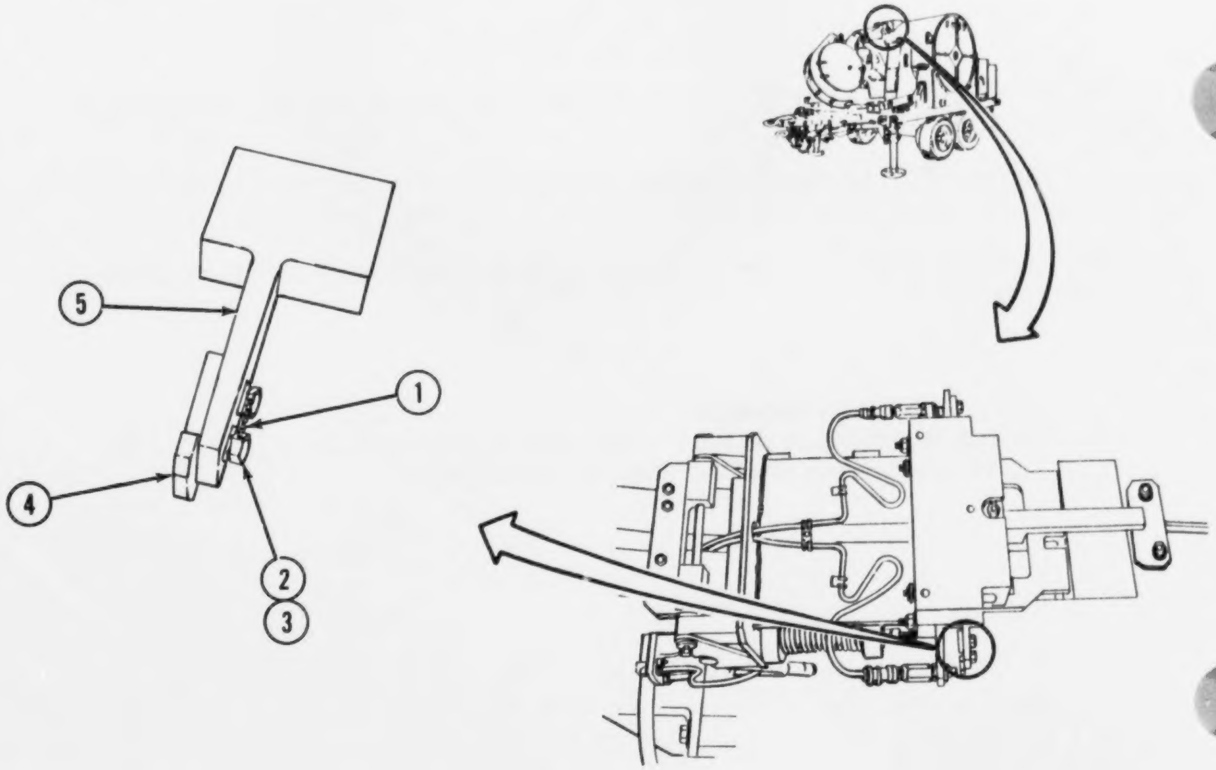
Flying bits of metal can blind you. Always wear goggles when you cut metal or use power tools.

NOTE

Left and right output proximity sensor pads are removed the same way. This procedure shows left output proximity sensor pad.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

2. REMOVE LEFT OUTPUT PROXIMITY SENSOR PAD FROM LEFT PIVOT ARM.
   - Cut and remove safety wire (1) from two screws (2). Use diagonal cutting pliers. Discard safety wire.
   - Remove two screws (2), washers (3), and sensor pad (4) from pivot arm (5). Use 7/16 inch socket with ratchet handle.



N. OUTPUT PROXIMITY SENSOR PADS INSTALLATION

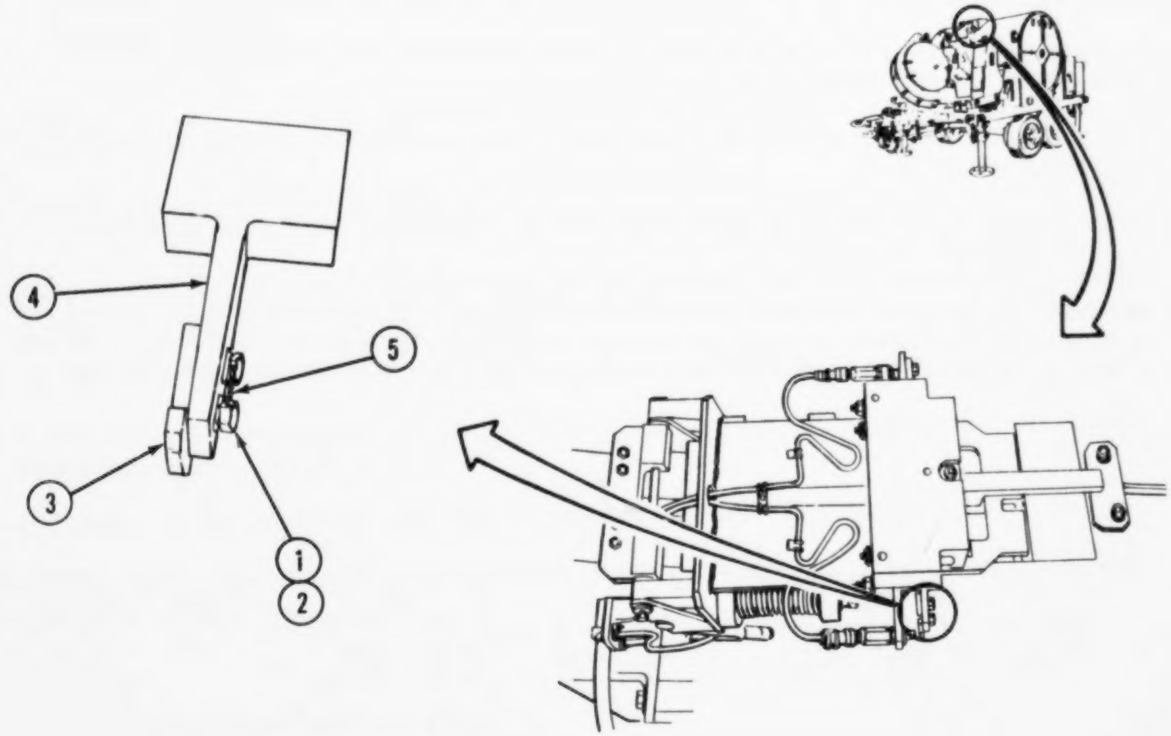
WARNING

Flying bits of metal can blind you. Always wear goggles when you cut metal or use power tools.

NOTE

Left and right output proximity sensor pads are installed the same way. This procedure shows left output proximity sensor pad.

1. INSTALL LEFT OUTPUT PROXIMITY SENSOR PAD ON LEFT PIVOT ARM.
   - Install two screws (1), washers (2), and sensor pad (3) on pivot arm (4). Use 7/16 inch socket with ratchet handle.
   - Install new safety wire (5) on two screws (1). Use slip joint pliers.



2. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

GO TO NEXT PAGE

3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

O. OUTPUT PROXIMITY SENSOR ARMS REMOVAL

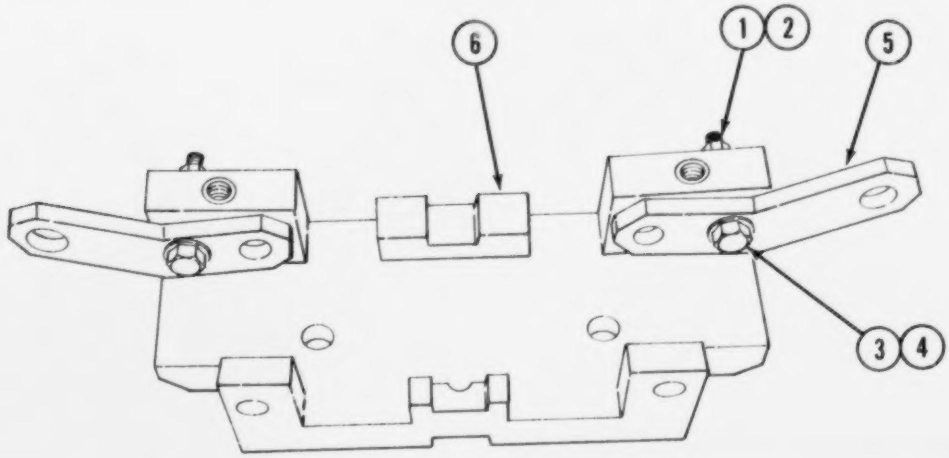
NOTE

PRELIMINARY PROCEDURES:
Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

NOTE

Left and right output proximity sensor arms are removed the same way. This procedure shows left sensor arm. If you replace both left and right sensor arms, you must double the sensor arm parts listed in Initial Setup.

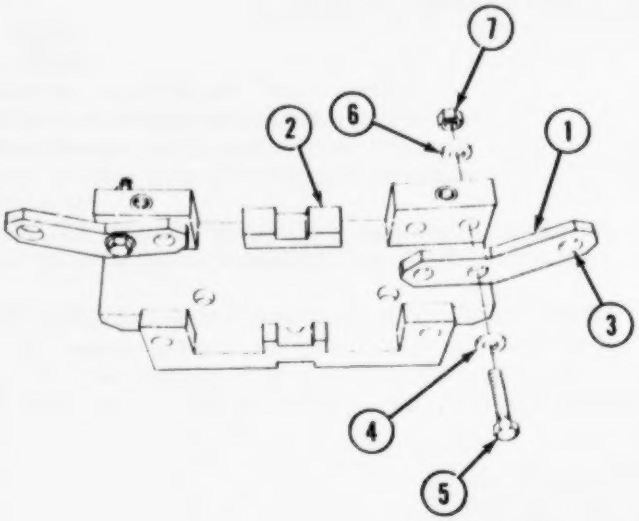
1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)
2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)
3. REMOVE MINE COUNTER BLOCK FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-20.)
4. REMOVE LEFT PIVOT ARM FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-29.)
5. REMOVE LEFT OUTPUT PROXIMITY SENSOR ARM FROM MINE COUNTER BLOCK.
   - Remove self-locking nut (1), washer (2), screw (3), washer (4), and sensor arm (5) from block (6). Use 9/16 inch open end wrench and 9/16 inch socket with ratchet handle. Discard self-locking nut.



P. OUTPUT PROXIMITY SENSOR ARMS INSTALLATION

NOTE

Left and right output proximity sensor arms are installed the same way. This procedure shows left sensor arm. If you replace both sensor arms, you must double sensor arm parts listed in Initial Setup.



1. INSTALL LEFT OUTPUT PROXIMITY SENSOR ARM ON MINE COUNTER BLOCK.
   - Position sensor arm (1) on block (2) with threaded hole (3) outside block.
   - Install sensor arm (1), washer (4), screw (5), washer (6), and new self-locking nut (7) on block (2). Use 9/16 inch socket with ratchet handle and 9/16 inch open end wrench. Do not tighten.
2. INSTALL LEFT PIVOT ARM ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-30.)
3. INSTALL MINE COUNTER BLOCK ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-23.)
4. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)
5. UNLOCK LEFT MAGAZINE DRIVE SPROCKET LOCKING CAM. (SEE TM 9-1095-205-10.)
6. ADJUST LEFT OUTPUT PROXIMITY SENSOR ARM. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-48.)
7. LOCK LEFT MAGAZINE DRIVE SPROCKET LOCKING CAM. (SEE TM 9-1095-205-10.)
8. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

FOLLOW-ON MAINTENANCE:
Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

GO TO NEXT PAGE

3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

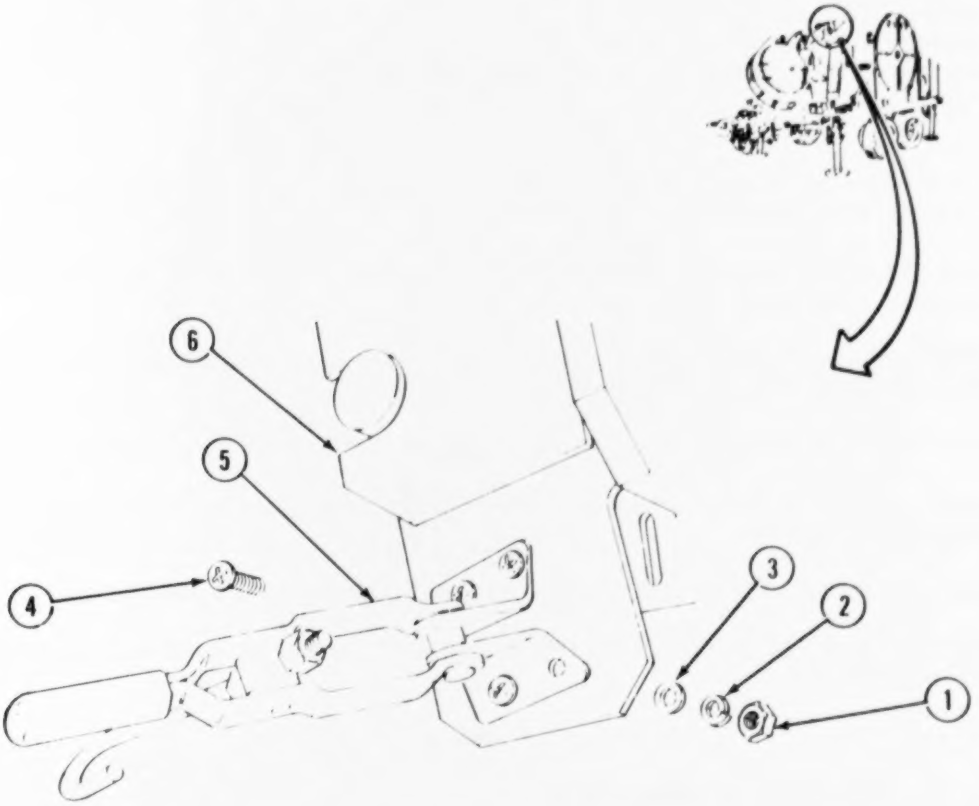
Q. TOGGLE CLAMPS REMOVAL

NOTE

Left and right toggle clamps are removed the same way. This procedure shows left toggle clamp. If you replace both toggle clamps, you must double the toggle clamp parts listed in Initial Setup.

1. RELEASE LEFT TOGGLE CLAMP HOOK FROM LEFT U-BOLT ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)

2. REMOVE LEFT TOGGLE CLAMP FROM OUTFEED CHUTE.
   - Remove four nuts (1), lock washers (2), washers (3), screws (4), and toggle clamp (5) from outfeed chute (6). Use No. 2 cross tip screwdriver and 3/8 inch box end wrench. Discard lock washers.



R. TOGGLE CLAMPS INSTALLATION

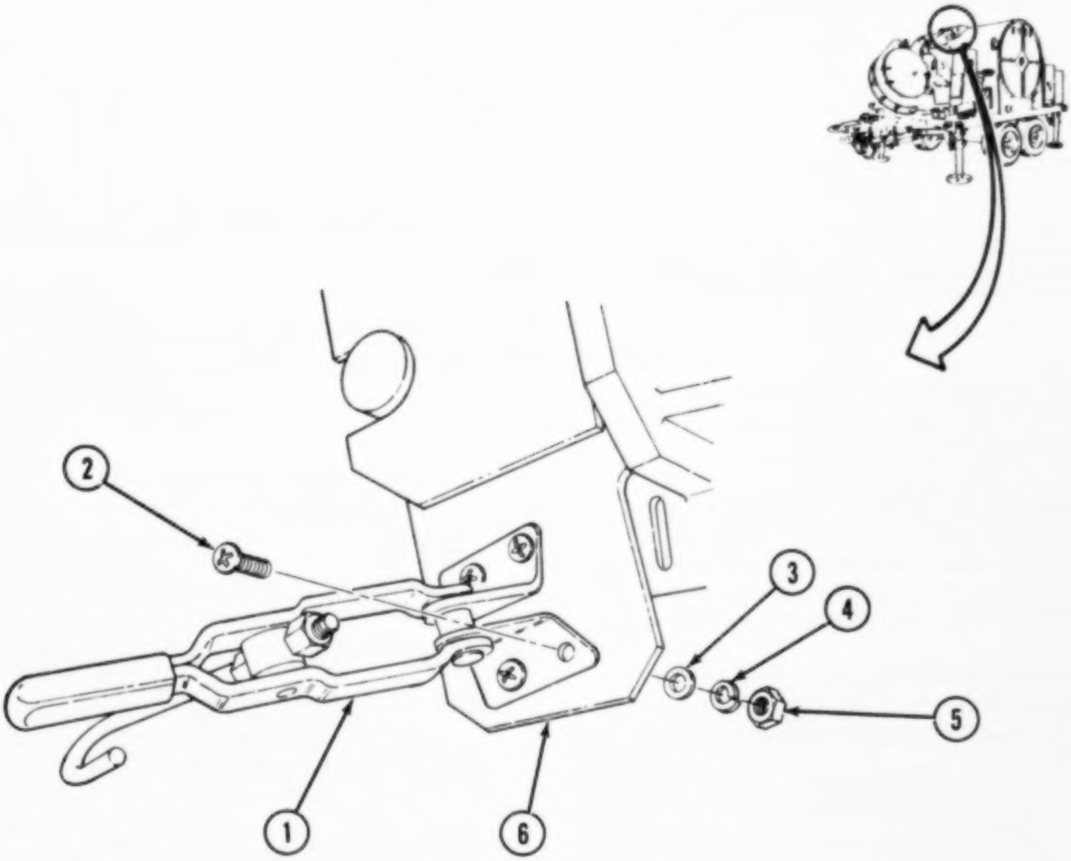
NOTE

Left and right toggle clamps are installed the same way. This procedure shows left toggle clamp. If you replace both toggle clamps, you must double the toggle clamp parts in Initial Setup.

1. INSTALL LEFT TOGGLE CLAMP ON OUTFEED CHUTE.
   - Install toggle clamp (1), four screws (2), washers (3), new lock washers (4), and nuts (5) on outfeed chute (6). Use No. 2 cross tip screwdriver and 3/8 inch box end wrench.

2. SECURE LEFT TOGGLE CLAMP HOOK TO LEFT U-BOLT ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-24.)

3. SET LEFT TOGGLE CLAMP U-BOLT GAP. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-39.)



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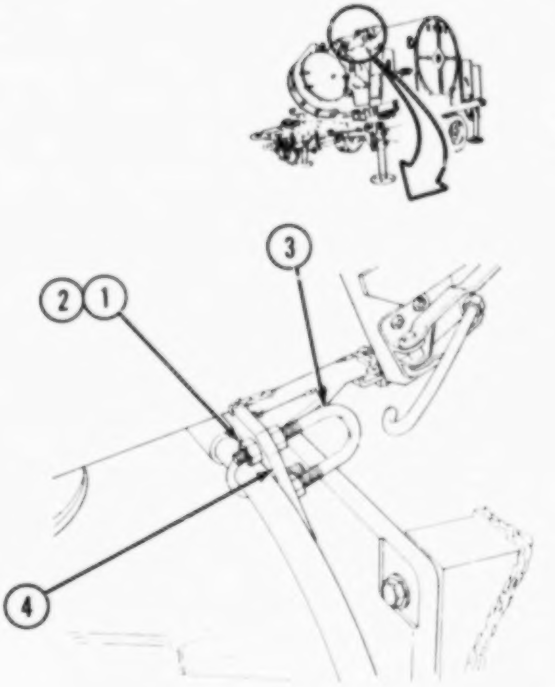
3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

S. U-BOLT ASSEMBLIES REMOVAL

NOTE

Left and right U-bolt assemblies are removed the same way. This procedure shows left U-bolt assembly.

1. RELEASE LEFT TOGGLE CLAMP HOOK FROM LEFT U-BOLT ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)
2. REMOVE LEFT U-BOLT ASSEMBLY FROM OUTFEED CHUTE BRACKET.
   - Remove two nuts (1), washers (2), and U-bolt assembly (3) from bracket (4). Use 9/16 inch socket with ratchet handle.

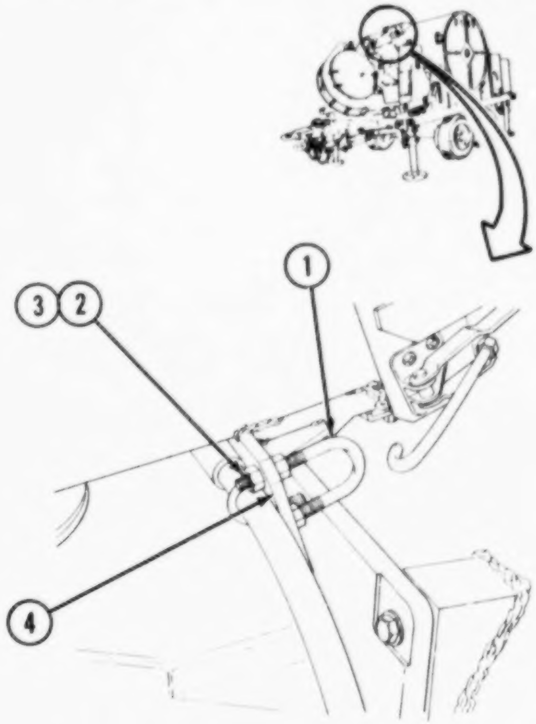


T. U-BOLT ASSEMBLIES INSTALLATION

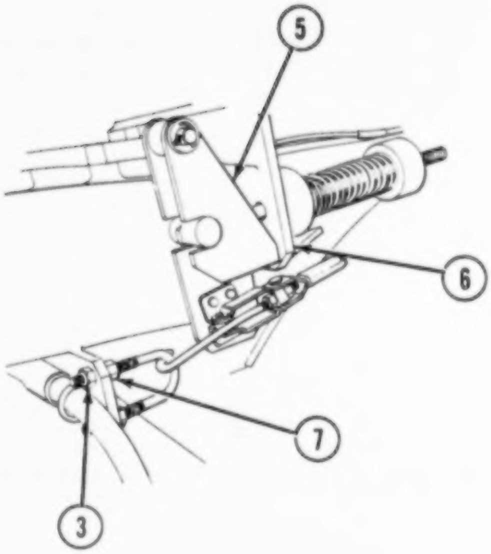
NOTE

Left and right U-bolt assemblies are installed the same way. This procedure shows left U-bolt assembly.

1. INSTALL LEFT U-BOLT ASSEMBLY ON OUTFEED CHUTE BRACKET.
   - Install U-bolt assembly (1), two washers (2), and nuts (3) on bracket (4). Use 9/16 inch socket with ratchet handle. Do not tighten.
2. SECURE LEFT TOGGLE CLAMP HOOK TO U-BOLT ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-24.)



3. SET LEFT U-BOLT ASSEMBLY GAP.
   - Measure gap between spring tension bracket (5) and bottom of spring mounting plate (6). Use thickness gage. Gap should be 0.06 — 0.09 in. (1.60 — 2.38 mm).
   - If gap is not correct, adjust two nuts (3) and two nuts (7) until gap is correct. Use 9/16 inch open end wrench and 9/16 inch socket with ratchet handle.
   - If gap is correct, tighten two nuts (3) and two nuts (7). Use 9/16 inch box end wrench and 9/16 inch socket with ratchet handle.



U. OUTFEED CHUTE SPRINGS REMOVAL

NOTE

PRELIMINARY PROCEDURE:
Swing Launcher To Far Right. (See TM 9-1095-205-10.)

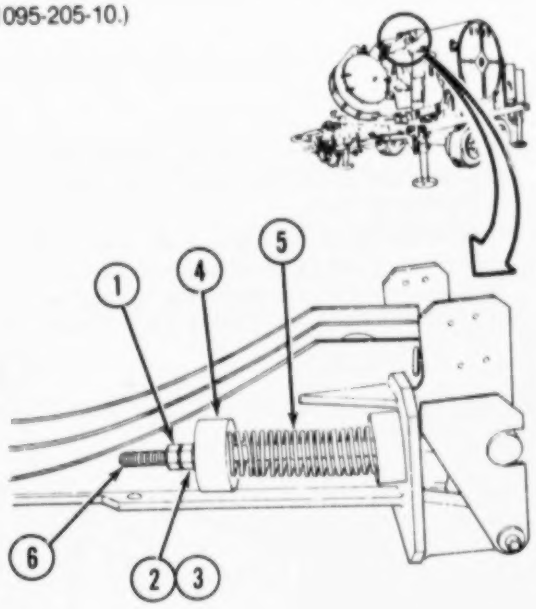
NOTE

Left and right outfeed chute springs are removed the same way. This procedure shows left spring.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

2. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)

3. REMOVE LEFT OUTFEED CHUTE SPRING FROM LEFT SPRING ROD.
   - Remove nut (1), nut (2), washer (3), spring cup (4), and spring (5) from spring rod (6). Use 3/4 inch box end wrench.



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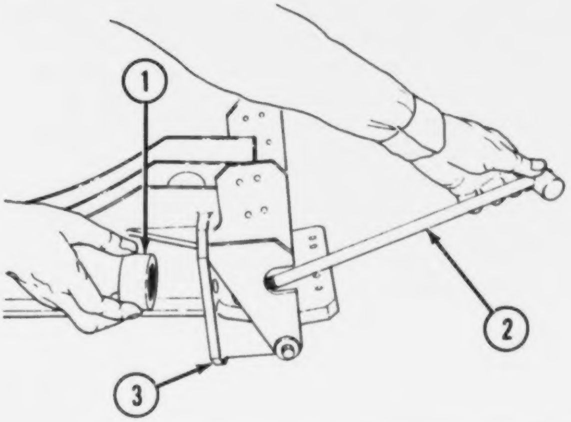
U. OUTFEED CHUTE SPRINGS REMOVAL — Continued

4. REMOVE LEFT SPRING ROD FROM OUTFEED CHUTE.
   - Remove spring cup (1) from spring rod (2).
   - Remove spring rod (2) from outfeed chute (3).

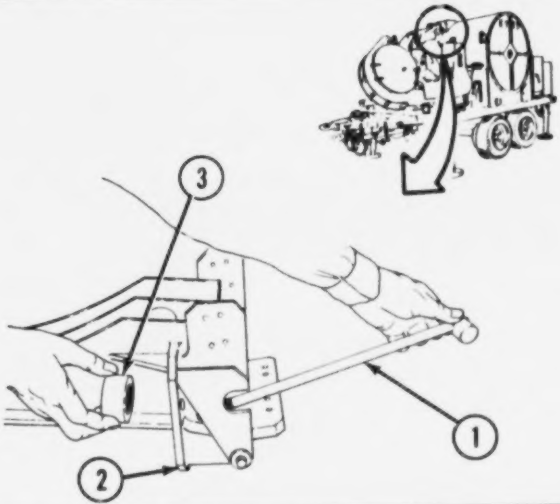


V. OUTFEED CHUTE SPRINGS INSTALLATION

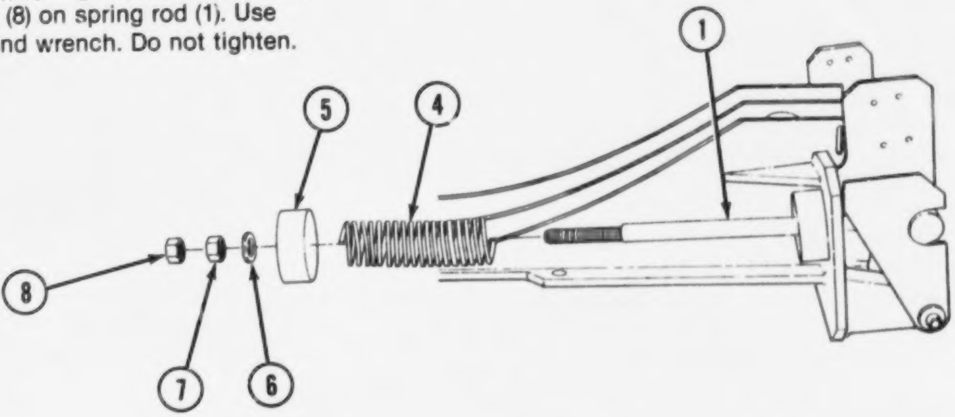
NOTE

Left and right outfeed chute springs are installed the same way. This procedure shows left spring.

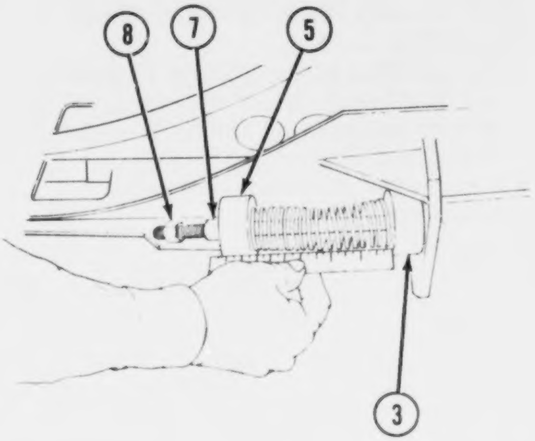
1. INSTALL LEFT SPRING ROD ON OUTFEED CHUTE.
   - Install spring rod (1) in outfeed chute (2).
   - Install spring cup (3) on spring rod (1).



2. INSTALL LEFT OUTFEED CHUTE SPRING ON LEFT SPRING ROD.
   - Install spring (4), spring cup (5), washer (6), nut (7), and nut (8) on spring rod (1). Use 9/16 inch box end wrench. Do not tighten.



3. ADJUST LEFT OUTFEED CHUTE SPRING.
   - Tighten nut (7) until distance between spring cup (3) and spring cup (5) is 4 1/8 — 4 5/8 in. (10.47 — 11.85 cm). Use 3/4 inch box end wrench and steel rule.
   - Tighten nut (8) against nut (7). Use 3/8 inch box end wrench and 3/4 inch open end wrench.
4. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)
5. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)



W. OUTFEED CHUTE WELDMENT REMOVAL

NOTE

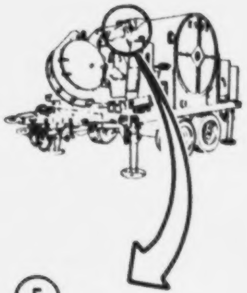
PRELIMINARY PROCEDURES:
Swing Launcher To Far Right. (See TM 9-1095-205-10.)
Open Right Battery Box Cover. (See TM 9-1095-205-10.)
Remove Negative Lead From No. 2 Battery. (See TM 9-1095-205-20.)

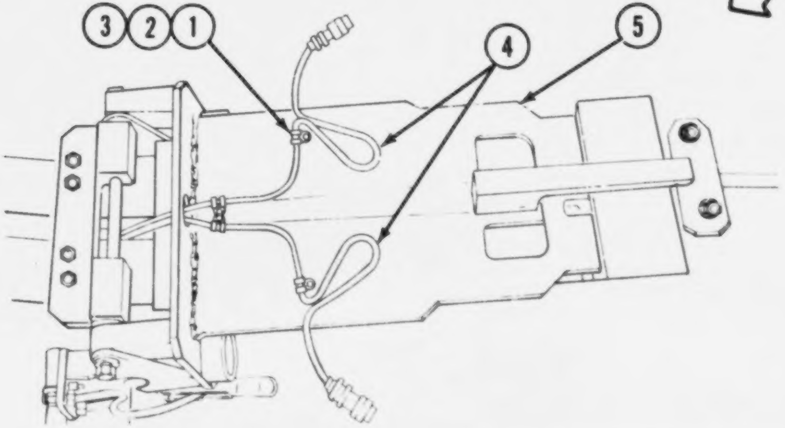
1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)
2. REMOVE TWO OUTPUT PROXIMITY SENSORS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-17.)
3. REMOVE MINE COUNTER BLOCK ASSEMBLY FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-20.)
4. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)
5. REMOVE TWO OUTFEED CHUTE SPRINGS FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-39.)
6. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)

GO TO NEXT PAGE

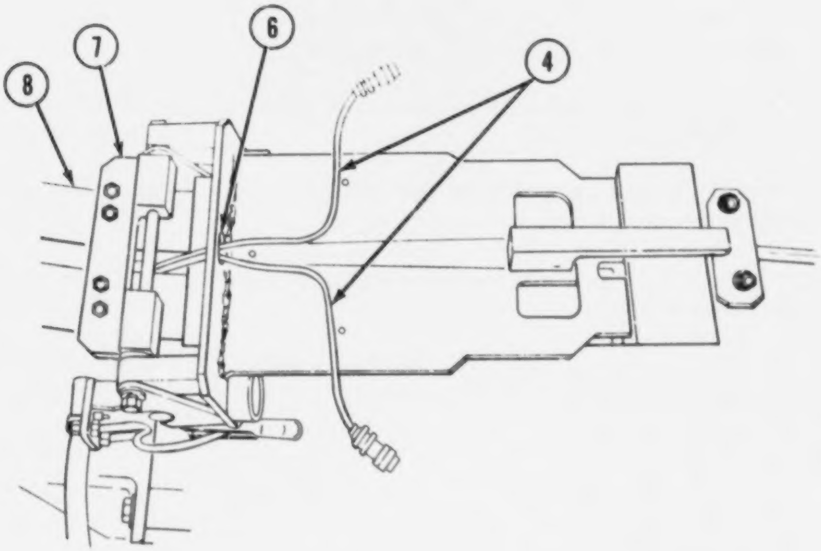
W. OUTFEED CHUTE WELDMENT REMOVAL — Continued

7. REMOVE TWO CABLE ASSEMBLIES AND FOUR CLAMPS FROM OUTFEED CHUTE WELDMENT.
   - Remove three screws (1), lock washers (2), and four clamps (3) with cable assemblies (4) from weldment (5). Use No. 2 cross tip screwdriver. Discard lock washers.
   - Remove four clamps (3) from cable assemblies (4).

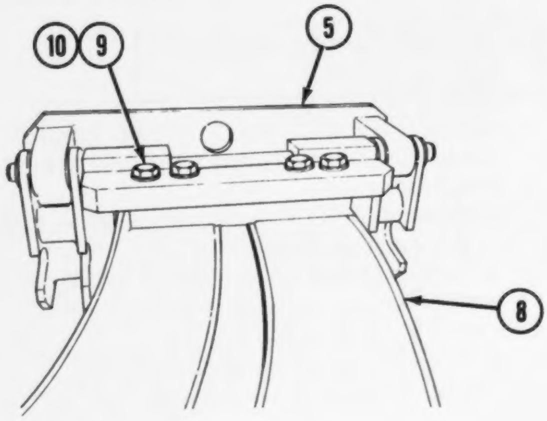




8. PULL CABLE ASSEMBLIES (4) THROUGH OUTFEED CHUTE WELDMENT HOLE (6), UNDER PIVOT BLOCK (7), AND THROUGH TWIN DROP CHUTE ASSEMBLY (8).



9. REMOVE OUTFEED CHUTE WELDMENT FROM TWIN DROP CHUTE ASSEMBLY.
   - Remove four screws (9), lock washers (10), and weldment (5) from twin drop chute assembly (8). Use 9/16 inch socket with ratchet handle. Discard lock washers.



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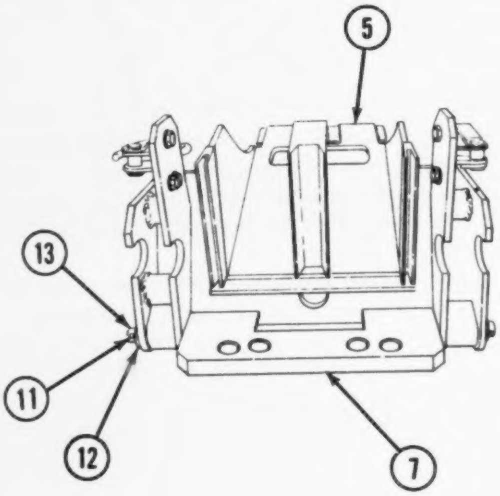
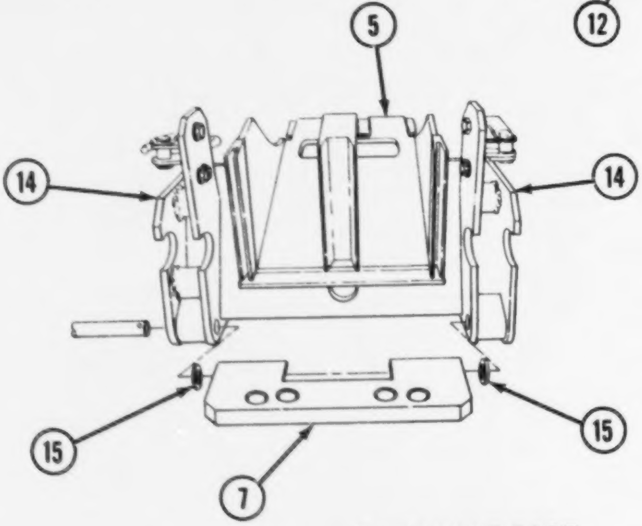
10. REMOVE PIVOT BLOCK AND TWO SPRING TENSION BRACKETS FROM OUTFEED CHUTE WELDMENT.
    - Remove two cotter pins (11) and washers (12) from shaft (13). Use round nose pliers. Discard cotter pins.
    - Remove paint from exposed parts of shaft (13). Use flint abrasive paper.
    - Heat pivot block (7), and drive shaft (13) from weldment (5). Use 14 inch x 7/16 inch steel rod, ball peen hammer, and cutting and welding torch outfit.
    - Remove pivot block (7), two brackets (14), and washers (15) from weldment (5).





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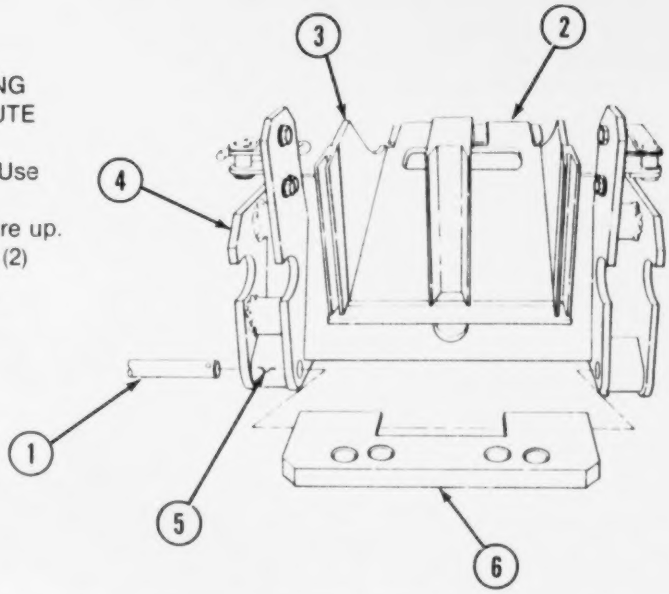
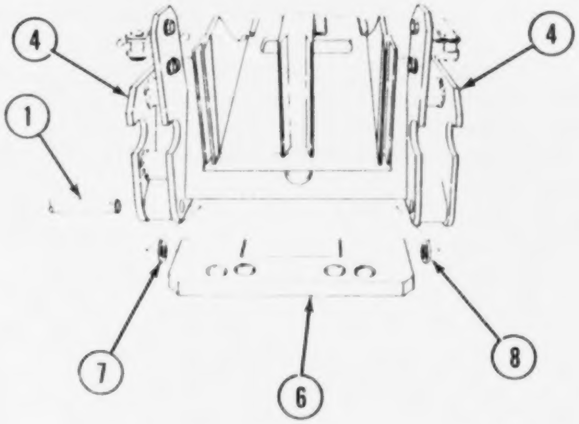
3-6 OUTFEED AND CHUTE AND MINE COUNTING ASSEMBLY — Continued

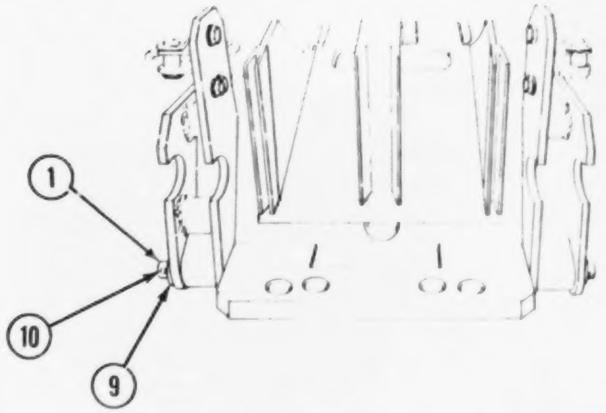
X. OUTFEED CHUTE WELDMENT INSTALLATION

1. INSTALL PIVOT BLOCK AND TWO SPRING TENSION BRACKETS ON OUTFEED CHUTE WELDMENT.
   - Clean shaft (1) of paint and oxidation. Use flint abrasive paper.
   - Turn weldment (2) so mine guides (3) are up.
   - Position two brackets (4) on weldment (2) with slots (5) facing you.
   - Position pivot block (6) between two brackets (4), with flat side up.

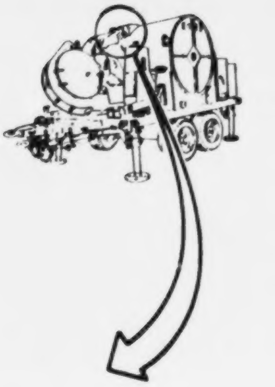


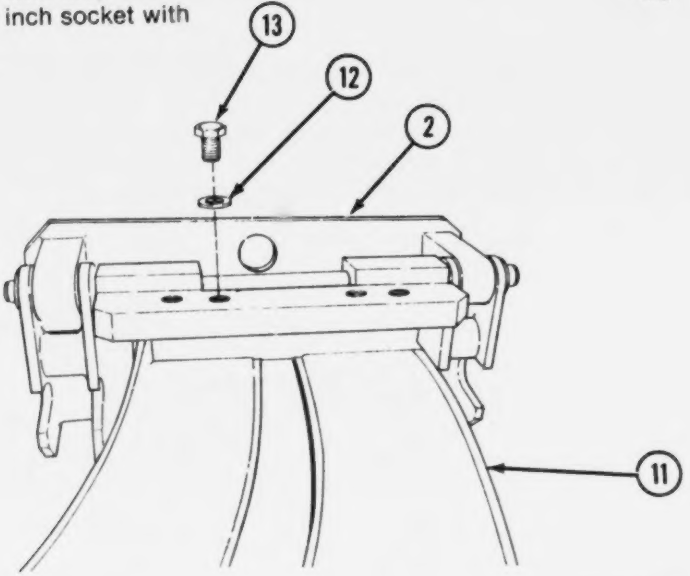
- Apply light coat of grease to shaft (1) and to holes in pivot block (6).
- Install shaft (1) through bracket (4), washer (7), pivot block (6), washer (8), and bracket (4).
- Install two washers (9) and new cotter pins (10) on shaft (1). Use round nose pliers.



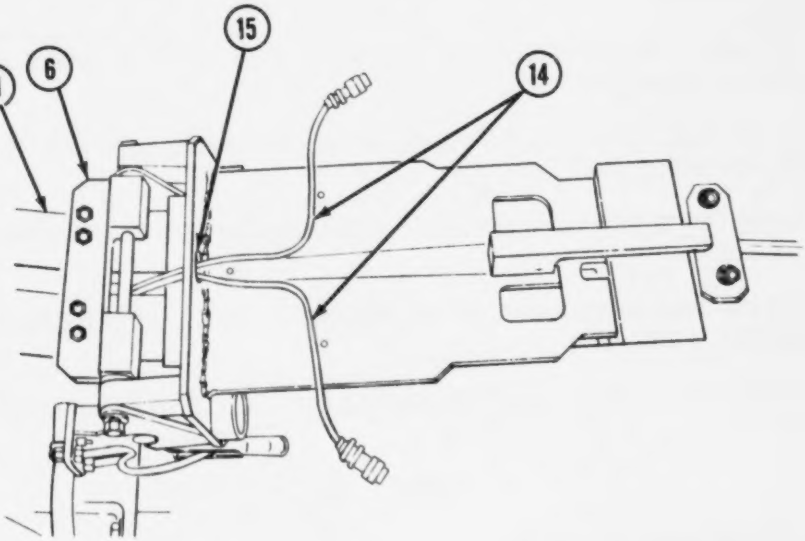


2. INSTALL OUTFEED CHUTE WELDMENT ON TWIN DROP CHUTE ASSEMBLY.
   - Position weldment (2) on twin drop chute assembly (11) with mounting holes alined.
   - Install weldment (2), four new lock washers (12), and screws (13) on twin drop chute assembly (11). Use 9/16 inch socket with ratchet handle.





3. FEED CABLE ASSEMBLIES (14) THROUGH TWIN DROP CHUTE ASSEMBLY (11), UNDER PIVOT BLOCK (6), AND THROUGH OUTFEED CHUTE WELDMENT HOLE (15).



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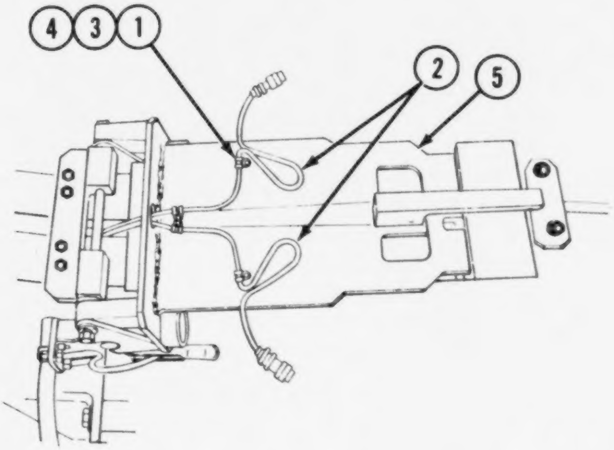
X. OUTFEED CHUTE WELDMENT INSTALLATION — Continued

CAUTION

Cable assemblies can be damaged if installed without slack. Install cable assemblies with slack when outfeed chute and mine counting assembly is in down position.

4. INSTALL TWO CABLE ASSEMBLIES AND FOUR CLAMPS ON OUTFEED CHUTE WELDMENT.
   - Place four clamps (1) on cable assemblies (2).
   - Install four clamps (1) with cable assemblies (2), three new lock washers (3), and screws (4) on weldment (5). Use No. 2 cross tip screwdriver.
   - Leave 20 in. (50.8 cm) service loop at end of cable assemblies (2).



5. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)

6. INSTALL TWO OUTFEED CHUTE SPRINGS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-40.)

7. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)

8. INSTALL MINE COUNTER BLOCK ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-23.)

9. INSTALL TWO OUTPUT PROXIMITY SENSORS ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-18.)

10. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

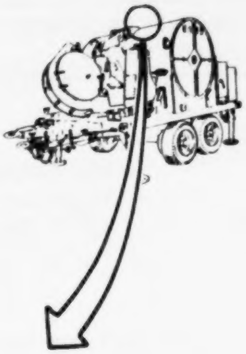
FOLLOW-ON MAINTENANCE:

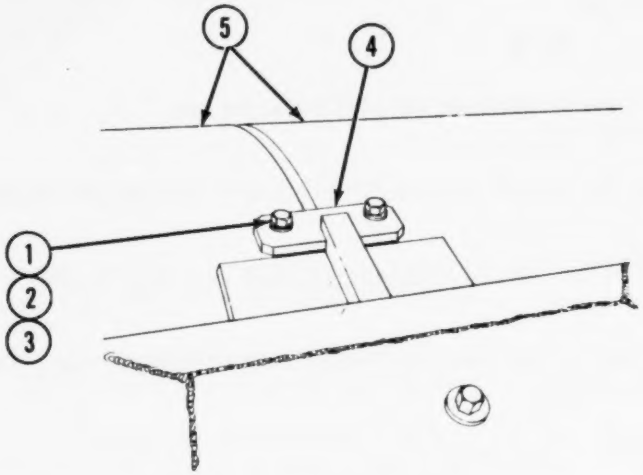
Install Negative Lead On No. 2 Battery. (See TM 9-1095-205-20.)
Close Right Battery Box Cover. (See TM 9-1095-205-10.)

Y. PILOT BLOCK REMOVAL

REMOVE PILOT BLOCK FROM MAGAZINE DRUMS.

- Remove two screws (1), lock washers (2), washers (3), and pilot block (4) from magazine drums (5). Use 9/16 inch socket with ratchet handle. Discard lock washers.

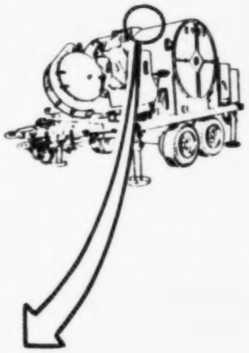


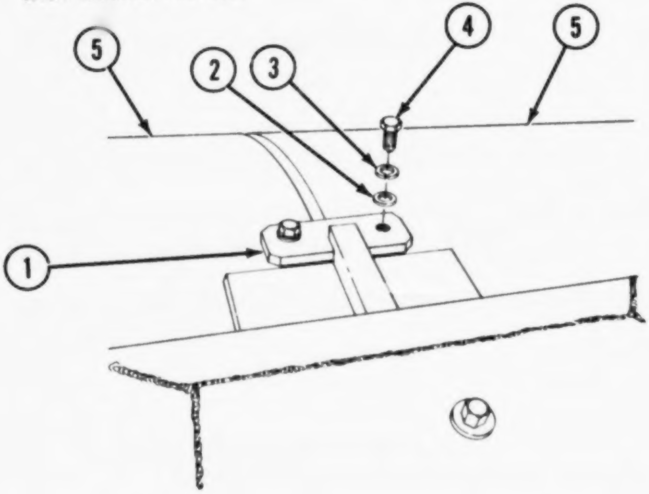


Z. PILOT BLOCK INSTALLATION

INSTALL PILOT BLOCK ON MAGAZINE DRUMS.

- Install pilot block (1), two washers (2), new lock washers (3), and screws (4) on magazine drums (5). Use 9/16 inch socket with ratchet handle.





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3-6 OUTFEED CHUTE AND MINE COUNTING ASSEMBLY — Continued

AA. OUTPUT PROXIMITY SENSOR ARMS ADJUSTMENT

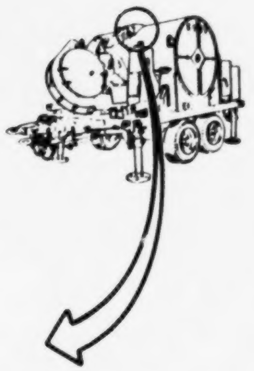
NOTE

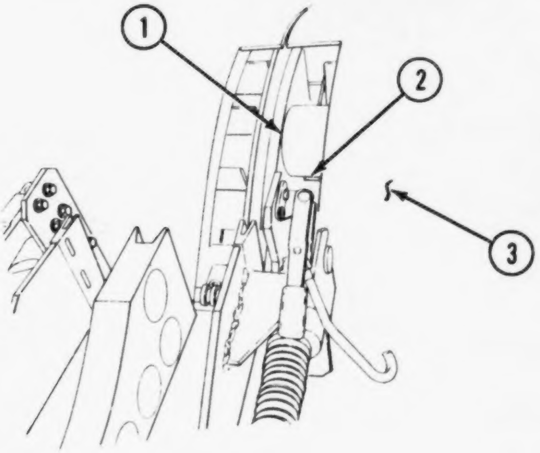
PRELIMINARY PROCEDURE:
Unlock Left Magazine Drive Sprocket Locking Cam. (See TM 9-1095-205-10.)

NOTE

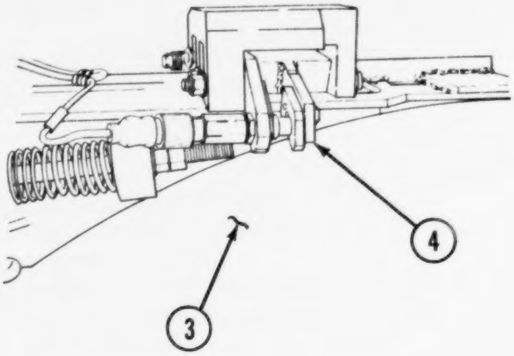
Left and right output proximity sensor arms are adjusted the same way. This procedure shows left sensor arm.

1. REMOVE MINE COUNTER COVER FROM DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)
2. RELEASE TWO TOGGLE CLAMP HOOKS FROM U-BOLT ASSEMBLIES. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)
3. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)
4. PLACE PRACTICE MINE (1) BETWEEN TWO REEL FLIGHT BARS (2) AT TOP OF LEFT MAGAZINE (3).
5. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)





6. POSITION PRACTICE MINE FOR SENSOR ARM ADJUSTMENT.
   - Turn left magazine (3) until pivot arm (4) is at lowest point of movement. Use manual crank. Use helper.



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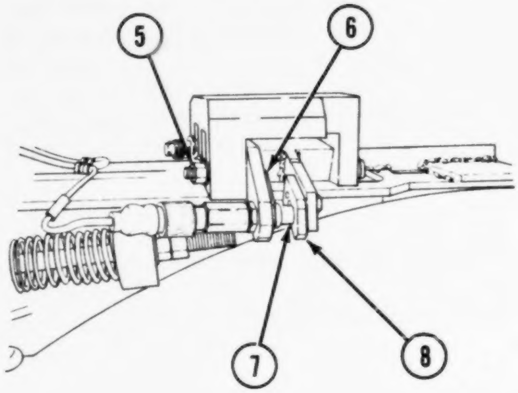
7. ADJUST SENSOR ARM ON MINE COUNTER BLOCK.
   - Loosen nut (5). Use 9/16 inch box end wrench and 9/16 inch socket with ratchet handle.
   - Move sensor arm (6) until bottom edge of sensor face (7) lines up with bottom edge of sensor pad (8).
   - Tighten nut (5). Use 9/16 inch box end wrench and 9/16 inch socket with ratchet handle.



8. LIFT AND OPEN OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-21.)

9. REMOVE PRACTICE MINE FROM LEFT MAGAZINE.

10. LIFT AND CLOSE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-22.)

11. SECURE TWO TOGGLE CLAMP HOOKS TO U-BOLT ASSEMBLIES. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-24.)

12. INSTALL MINE COUNTER COVER ON DISPENSER. (SEE OUTFEED CHUTE AND MINE COUNTING ASSEMBLY, PAGE 3-16.)

NOTE

FOLLOW-ON MAINTENANCE:
Lock Left Magazine Drive Sprocket Locking Cam. (See TM 9-1095-205-10.)

END OF TASK

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

TEMPERATURE

5/9 (°F − 32) = °C
212° Farenheit is equivalent to 100° Celsius
90° Farenheit is equivalent to 32.2° Celsius
32° Farenheit is equivalent to 0° Celsius
9/5 (°C) + 32 = °F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pounds per Square Inch	Kilopascals	6.895
Pounds per Square Inch	Kilograms per Square Centimeter	0.070
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Kilograms per Square Centimeter	Pounds per Square Inch	14.220
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621